


CA20N TR705  
-77I51

**Report of the  
Ontario Committee  
on  
Inflation Accounting**





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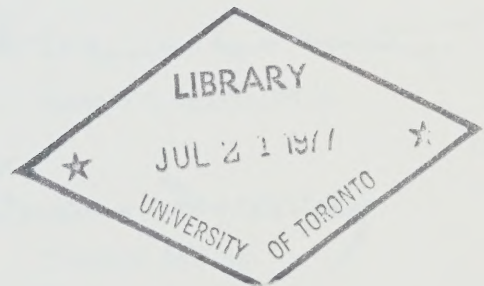


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# Report of the Ontario Committee on Inflation Accounting



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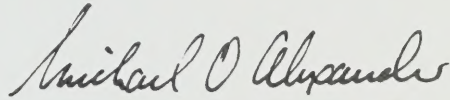
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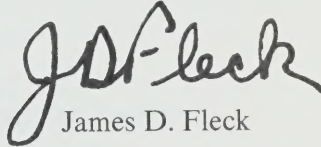


The Honourable W. Darcy McKeough  
Treasurer of Ontario

We take pleasure in submitting our report on inflation accounting. The report contains recommendations relating to all areas of examination set out in the terms of reference of the study.



Michael O. Alexander, FCA  
Chairman



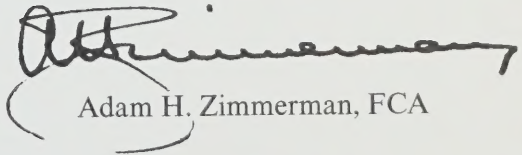
James D. Fleck



Samuel A. Martin, FCA



\*Gordon Milling



Adam H. Zimmerman, FCA

\*A minority report and recommendation has been prepared by Gordon Milling and is included on page 31 of this Report.

June 1977



# Committee

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# Terms of Reference

Whereas it is deemed desirable to examine the impact of inflation on business earnings and the economy,

Whereas there is a need to adopt principles of accounting based not only on the traditional cost concept but also on the current replacement value,

And whereas there is a need for uniform financial disclosure based on such revised principles of accounting,

It is therefore recommended that there be established a Committee on Inflation Accounting for the purposes hereinafter mentioned:

- to investigate the problems, benefits and implications of inflation accounting including an examination of such matters as government economic and regulatory policies; the process of capital financing in equity and credit markets; public perception of business; and the process of decision making in business.
- to investigate the ways and means by which the Government of Ontario could implement a program of financial disclosure based upon universally adopted principles of current value accounting including an examination of the legislative framework; and institutional constraints.
- to propose a set of alternative courses of action open to the Government of Ontario.





# Preface

The establishment of the Committee on Inflation Accounting, its terms of reference and membership, was announced in the Legislative Assembly of Ontario by the Honourable W. Darcy McKeough, Treasurer of Ontario, on November 23, 1976. The Committee was asked to submit its report by the end of June 1977.

Although in one sense a technical matter, inflation accounting has a number of broad implications for society. The inflationary conditions of the past few years and their serious effect on the economy—on businesses, governments and individuals—make this present examination most timely.

A number of other jurisdictions have studied the problem of how to measure and report the effects of inflation. There is general agreement in their reports that change in the manner of financial reporting is needed to reflect the effects of inflation meaningfully and that the introduction of inflation accounting will mean a significantly different way of viewing business results.

Should inflation accounting develop to its ultimate comprehensive form—current value accounting—a substantial modification of present accounting methodologies, which have been in use for many years, will be necessary. It would be unwise to proceed along this path with undue haste and without assessing all possible effects. The implications of inflation are so severe, however, some start must be made without delay to improve the measurement and reporting of financial and economic data in ways that indicate with some reliability the realities of the current economic environment.

In conducting its work, the Committee examined and reviewed studies, proposals and plans prepared in Canada and in other countries. Also, it undertook certain research studies relating to specific measurement problems. Analysis was made of the potential impact of inflation accounting on business and other sectors of society.

The Committee did not address itself specifically to the development of the procedural details of an inflation accounting system. Rather, its prime objective was to present a clear analysis of the current situation and to suggest to government workable approaches to a form of

inflation accounting that could be objective, simple to apply, readily understood and uniformly adopted.

The Committee met frequently during the course of the study to review progress and to give direction to the research efforts. Considerable emphasis was placed on gathering evidence and opinion from beyond the accounting community. A series of interviews and discussions was held with experienced representatives of business, government and organized labour. Meetings were also held with other groups and individuals having direct experience or expertise related to the subject. These included the Securities and Exchange Commission in the United States, The Institute of Chartered Accountants of Ontario, The Canadian Institute of Chartered Accountants, Statistics Canada, the Inflation Accounting Steering Committee in the United Kingdom, officials of the Ministry of Treasury, Economics and Intergovernmental Affairs, appraisal experts, investment analysts, investment dealers and corporate executives.

At an early stage in the study, the Committee decided to request submissions from the general public. Accordingly, advertisements were placed in English and French newspapers in major centres in Ontario. In response, the Committee received forty-seven submissions. These were most valuable in adding the views and experiences of a variety of individuals and organizations, some of whom might not have been contacted for input by other means.

The proposals made by the Committee reflect the fact that the methodologies of inflation accounting are in the early stages of development. There is little empirical evidence of its ultimate effects on an economy, and on government and business policies and actions. Inevitably, many questions remain to be answered and the proposals contained in this report will certainly not be the last word. Practical experience in Canada and in other countries will form the basis for future modifications and improvements.

The Committee concluded, however, that some action is called for immediately and that the adoption of a method of inflation accounting disclosure as recommended, would be an appropriate first step while providing a sound base for the future evolution of the system.

The format of the report has been designed to facilitate the ready access of the reader to report details. There is a summary of the report which covers all major elements of the study but omits excessive technical detail. The remainder of the report commences with the detailed review of current problems followed by discussions of the role of accounting, the impact of inflation on the tax system and alternative approaches in this area, the impact of inflation accounting on various elements of society and proposed methods of inflation accounting disclosure. In the final chapter, ways and means of implementation are described, together with concomitant advantages and disadvantages.

Supplementary technical papers, prepared at the request of the Committee, are listed in the table of contents and are available separately.

The members of the Committee are grateful to those who took the time and effort to make written submissions, and to the many groups and individuals who provided valuable insight and knowledge on this subject. The Committee acknowledges the help it received from Morley

Carscallen and Charles Salter, and from John Bossons, John Boersema, Irving Rosen, Glenn Jenkins and Ross Skinner for the supplementary studies they conducted and for their generous advice. Finally, it thanks the project team for its dedication to the task and to meeting the deadline. Special mention should be given to Audrey Eastwood for her invaluable assistance in handling the production of this report.





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## **Supplementary Papers**

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| No. 1 Accounting Adjustments for<br>Effects of Inflation   |                      |
| • Inventories  |                      |
| • Fixed Assets   |                      |
| • Effects of Financing   | Touche Ross & Co.    |
| No. 2 Memorandum on the Significance of<br>Debt Financing to an Enterprise<br>During an Inflationary Period and<br>the Implications Thereof to a System<br>of Inflation Accounting | Ross M. Skinner, FCA |
| No. 3 Inflation and Small Business Firms   | Irving L. Rosen, FCA |
| No. 4 General Price Level Accounting   | John M. Boersema     |
| No. 5 The Impact of Inflation on<br>Income and Financing of Large<br>Non-financial Corporations  | John Bossons         |

Copies of the Supplementary Papers may be obtained from:

Communications Group  
Ministry of Treasury, Economics and Intergovernmental Affairs  
5th Floor  
Frost Building South  
Toronto, Ontario  
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(416) 965-7171

# Introduction

Inflation is one of the most critical economic problems of this time. It is a phenomenon experienced both domestically and globally. Sharp increases in the rate of inflation have occurred during recent years and while there is some expectation of its abatement from these recent sharp peaks, it is expected to remain as a significant factor in the economy in the foreseeable future. The low and manageable inflation levels of a decade ago are not predicted in economic forecasts covering the next five to ten years.

Inflation submits to no ready diagnosis or remedial prescription. It has many observable causes and many effects, both social and economic. It can be checked, in part, by various means, but many of these result in undesirable side effects.

Inflation is a highly complex and persistent phenomenon. Economists, businessmen and policy makers have learned a great deal about it since it has become a pervasive and threatening element in our society. But in this they have only been hindered by traditional financial, economic and general statistical measurement systems which do not explicitly recognize the existence of inflation.

Financial transactions and related reports reflect original or historical costs. These do not reflect the fact that inflation introduces distortions into the basic monetary measurement device, the dollar. Financial transactions occurring in successive periods are in the current dollars of those periods, which makes it difficult to compare performance over time.

There is a growing body of opinion that recognizes that this inability to measure the effects of inflation has retarded the ability of business and government to combat it effectively. In other words, effective decisions cannot be made without reliable and accurate information.

In commissioning this study, the Government of Ontario has recognized this need to measure and disclose the effects of inflation in order to increase its ability to come to grips with the problem. To do this, it is unnecessary to explore new and uncharted fields of accounting and economic statistics. The goals of the study can be met by an evaluation of the state of the art of inflation accounting technology in other juris-

dictions, appropriate local research, and an assessment of implementation implications for business and industry in Ontario.

How to account for inflation is not a new problem. It has been the subject of prolonged and thorough research and in certain cases has been operationally applied. In the United States, the United Kingdom and Australia, inflation accounting has received significant attention and moves have been made toward its initial implementation. In the Netherlands, N.V. Philips' Gloeilampenfabrieken has used replacement cost accounting routinely in its published reports for more than forty years.

There are, however, no easy answers to the measurement of inflation and the disclosure of its effects, just as there are no easy answers to the problem of inflation itself. This report is designed to provide a better understanding of the problems. The adoption of its recommendations will provide better financial information of assistance to those economic decision makers in both business and government who must struggle with the complex issues of the inflationary crisis.

# Conclusions

- Conventional accounting methods do not reflect the impact of inflation. They produce distortions in financial statements which can mislead decision makers in government and business as well as the general public.
- Good information improves the probability of good decisions. To understand and deal with inflation, government, business and the public must have reliable financial information which reflects the realities of the economy and the effects of inflation on the productive capital of business and individuals.
- Toward this end the financial and economic measures used by business, government and investors should be modified by uniform, agreed upon means to take into account the effects of inflation. At this time, adoption of a comprehensive method of inflation accounting or current value accounting is not appropriate. An interim measure, the disclosure of the effects of inflation, is prudent.
- The disclosure of the effects of inflation as a supplementary but integral part of conventional financial statements, would provide business and government with data which would aid in decision making and policy development. It would engender greater public understanding of inflation, and of the nature of business itself. Such disclosure would also tend to improve business performance and productivity. It would help overcome the problems of credibility and uncertainty in the marketplace created by the distortions inherent in conventional financial statements.
- The statement of the effects of inflation should not be expressed in the conventional terms of 'net earnings' but in the terms of the economic realities of 'funds available for distribution or expansion'.





# Recommendations

- It is recommended that the Government of Ontario take the initiative in establishing the practice of disclosure of the effects of inflation on business in either of two ways:
  - by entreaty and leadership, encourage the adoption of a uniform method of financial disclosure of the effects of inflation by the Ontario business community, beginning on an experimental basis with companies having a year end after December 25, 1977, the methods to be refined through experience while being regarded as an interim measure until such time as business and the accounting profession are prepared to adopt a more comprehensive form of inflation accounting.
  - by recommending such disclosure to the business community on an experimental basis beginning in 1977, with a view to drafting disclosure regulations to the Ontario Securities Act as indicated by the results of the experimental period, such regulations to be effective in 1978 if their adoption is so indicated.



# Summary of the Report

The effect of inflation is not only destructive but also potentially devastating to the economy and thereby to the totality of our society as we know it. The problem is admittedly global, but in Ontario, with its mixed economy in which all sectors are interdependent, in a system whose economic health depends on the maintenance of productivity and the availability of capital for growth, inflation becomes the critical force which can upset the delicate balance between economic and social stability on the one hand, and chaos on the other.

Rising expectations and the resulting increased demands, the reduction in the real value of savings and capital along with the decline in the purchasing power of incomes, all contribute to the pressures on the system and the anxieties in our society. In 1919, John Maynard Keynes wrote:<sup>1</sup>

“As inflation proceeds and the real value of the currency fluctuates wildly from month to month, all permanent relations between debtors and creditors, which form the ultimate foundation of capitalism, become so utterly disordered as to be almost meaningless; and the process of wealth-getting degenerates into a gamble and a lottery. Lenin was certainly right. There is no subtler, nor surer means of overturning the existing basis of society than to debauch the currency. The process engages all the hidden forces of economic law on the side of destruction, and does it in a manner which not one man in a million is able to diagnose.”

The Committee has determined in its work that during the past six years:

- There was a 39% decline in the purchasing power of the Canadian dollar.
- Incomes have had to increase by 65% in order to stay abreast of the general price increases.
- The financial savings of individuals—insurance, pensions, bank accounts or bonds—are worth only 61% of their 1970 values.
  - Those who saved in order to purchase a home or an automobile found that waiting cost more than immediate spending of income.
  - Those who owned homes found they could sell them for more

but their gains were needed to buy another comparable home or to pay higher rent. Their gain was illusory.

- Those who had borrowed paid back less and those who had lent were repaid less.
- In summary, there was a massive erosion in the value of individual savings and capital. The same was true for business.
- Business needed more capital to do the same thing because:
  - Inventories cost more to maintain.
  - Plant, machinery and equipment cost more to maintain and to replace.
- This additional cost of capital represented more than 50% of reported earnings for those years. This fact is not disclosed in the conventional financial reports of business.
- Governments faced higher wages and increased expenditures, but over the past six years received an unintended gain of \$8 billion from the taxation system as a result of inflation.
  - This windfall gain was in effect a tax on capital and savings, thereby reducing the available productive capital of individuals and businesses.
  - This windfall is a transfer of real wealth from the private sector to the public sector. To finance social and other government expenditures, Canadians have, therefore, been living off their capital during inflation.
- In the absence of a uniform system of inflation accounting, which all would use, individual businesses have hesitated to show the effects of inflation in their financial reports.
- Inflation affects the cash requirements and liquidity of business. Reported income may far exceed the funds available for distribution or expansion of the business. Expected return on investment is low.
- The effects of inflation, having been inadequately measured, have contributed to distortions in the information needed for understanding the problem and deciding on the solutions.

The realities reported above are felt by the public but are not well known nor understood.

All sectors—business, investors, governments, employees, organized labour, the news media and the general public—must understand what inflation is doing to the economy if each is to play an effective part in overcoming the problem. Accurate and reliable financial information about how inflation affects the value of productive capital of both business and individuals must be measured and made available. Better information about the effects of inflation will not by itself eliminate the problem, but it will help decision makers to identify ways of reducing inflation and restoring the health of the economy.

The Committee has, therefore, concluded that the financial and economic measures used by business, investors and government should be modified to take into account the effects of inflation. A method of measurement and disclosure of the effects of inflation on businesses is suggested in this report as the place to start.



## **The Effects of Inflation**

Inflation has existed to some degree throughout Canadian economic history but in the past the effects have been less noticeable and less destabilizing. Canadians were, therefore, not prepared for the effects of recent serious inflation levels. Conventional approaches to the problems were reasonably adequate when there was little inflation. However, these traditional methods have clearly been unable to cope with the conditions of a highly inflationary environment.

The effects of inflation are not well enough understood. Part of the damage can be assessed in terms of the higher cost of living as reflected by increases in the Consumer Price Index or in similar indexes. These higher costs may or may not be offset by higher incomes. To the extent that they are, individual consumers may be shielded from the higher cost of living. If increases in wages do not match increases in costs, then the individual loses. But this is only the tip of the iceberg. The most profound and serious effect of inflation is on savings and capital.

### **Inflation and Savings**

Those who saved for the future or those who bought insurance or invested in bonds found that the value of their savings had eroded materially over recent years.

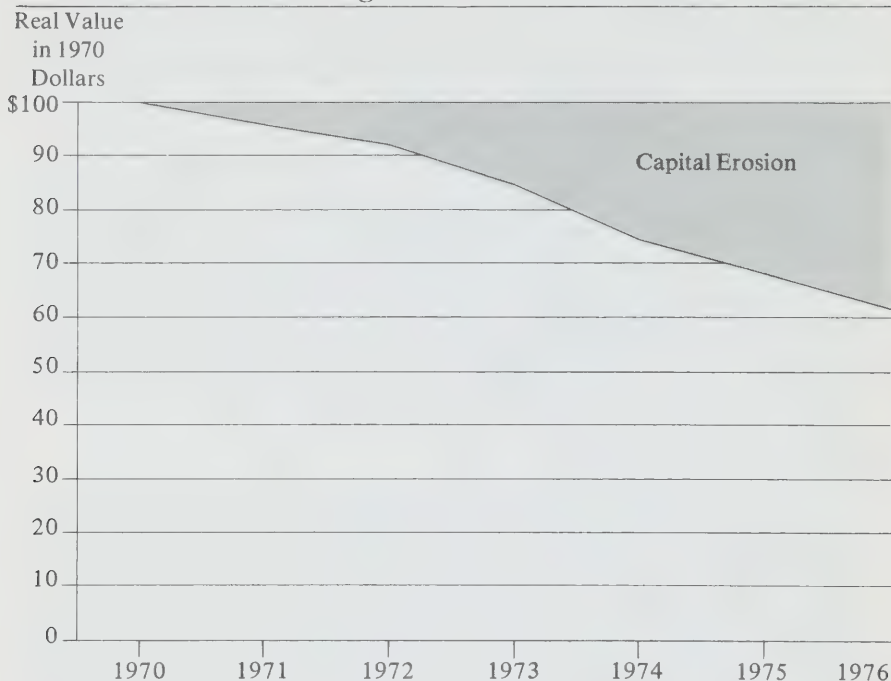
The effects of inflation on current real income derived from fixed income investment is not only that there is a reduction in terms of dollars of constant purchasing power, but also that the real value of the capital assets owned by the investor declines. Figure 1 illustrates the effects of accumulated capital erosion during the period 1970 to 1976. At the end of the six-year period, 39% of the real value of the initial capital had been eroded by inflation.

This means that the savings and capital of individuals have been reduced substantially in value and will not be able to perform the role for which they were intended. Inflation acts as an automatic tax on wealth and on our ability to provide or maintain incomes in real terms in the future.

### **Inflation and Business**

The problem of capital erosion which confronts individual investors, applies also to business. The capital required to finance inventories and to replace plant, machinery and equipment is such that dramatically larger amounts of capital are needed to conduct the same level of operations. This fact is not reflected in conventional financial reports.

Those firms which require additional capital to maintain inventories or fixed assets are, like individuals who are buying homes or automobiles at higher costs, forced to borrow larger amounts of money at higher interest rates. The additional capital is often borrowed on a short-term basis because equity financing is abnormally costly and difficult to obtain. During inflation investment funds that would normally flow toward business capital formation have been redirected to other less risky and more attractive investment alternatives.

**Figure 1****Inflation and Savings,  
Erosion in Value of Savings 1970-1976**

Source: Statistics Canada, National Income and Expenditure Accounts  
(Catalogue No. 13-001, various issues)

Note: The percentage capital erosion since 1970 is calculated as the cumulative change in the reciprocal of the Gross National Expenditure Implicit Price Index.

In reporting business income it is necessary to adjust for the effects of inflation on the cost of maintaining the capital of a business. To do so a business must:

- Provide for the cost of replacing inventory which may have been acquired at lower values before being sold but must be replaced at current costs.
- Provide for replacing fixed assets used during the period, taking account of the current costs at which such assets must be replaced.

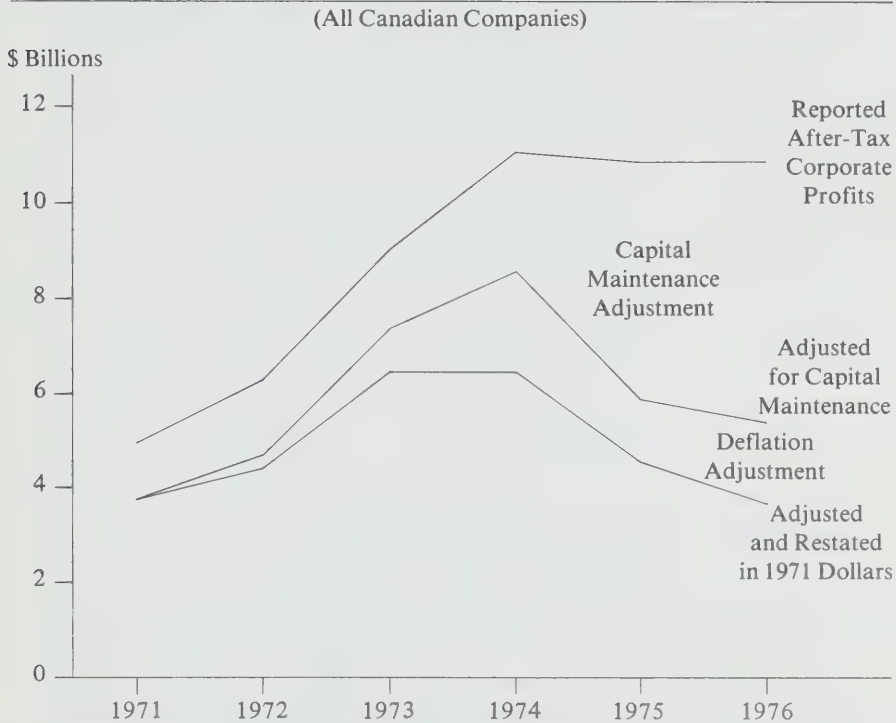
The precise nature of the adjustments is described later in this Report.

Because business finances part of its assets through borrowing, the owners of a business can potentially benefit from the effect of inflation on the decreasing real value of the amounts borrowed by the firm. There has been considerable controversy over how such gains on borrowings should be reflected. In our proposals we have reflected this potential gain for owners of the business by deducting from income only the share of the provisions for capital maintenance of assets which are normally financed by equity.

The extent to which current financial statements provide misleading figures on business profits is shown in Figure 2. Between 1971 and 1976, the reported profits of Canadian companies more than doubled. However, in real terms, the profits of Canadian companies were lower in 1976 than they were in 1971.

**Figure 2**

**Inflation and Profits,  
Measurement Errors in Reported After-Tax Corporate Profits  
1971-1976**



Source: Bossons, *Impact of Inflation*, Table 37.

Note: Government corporations are excluded from the figures shown on this chart.

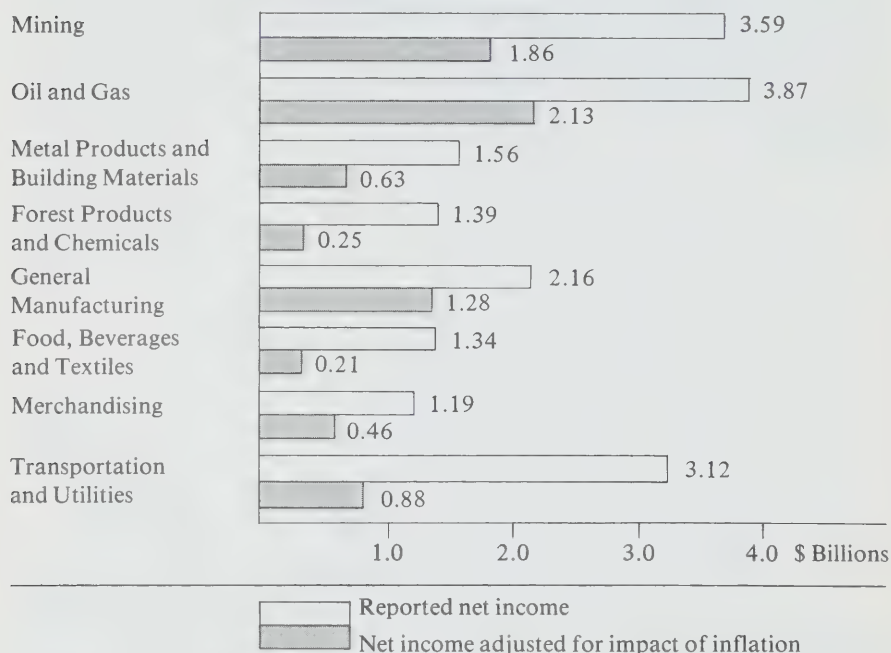
As for individual investors, it is necessary to do two things to measure real income from a business:

- Make provision for maintaining the value of capital assets.
- Restate income net of capital maintenance provisions to reflect changes in the purchasing power of money.

The business income reported in conventional statements includes two types of errors. First, reported income figures are misleading because of the understatement of capital maintenance provisions resulting from the use of unadjusted historical costs. This source of error in the case of inventory and capital assets resulted in an overstatement of reported earnings for all Canadian companies amounting to \$1.5 billion in 1971 and \$6 billion in 1976.

**Figure 3**  
**Inflation and Industry Sectors**  
**Comparison of Reported and Adjusted Net Incomes**  
**Cumulative by Industry Sector 1971-1975**

(279 Large Canadian Non-Financial Companies)



Source: Bossons, *Impact of Inflation*, Table 29.

The second type of error results from the reporting of profits in current dollars rather than in dollars of constant purchasing power. To compare year-by-year progress, it is necessary to restate incomes in constant dollars. When this is done in 1976, a further \$2 billion reduction is necessary in order to restate 1976 adjusted profits in terms that are comparable to 1971 profits.

The estimates shown in Figure 2 are necessarily crude, because no data on inflation-adjusted profits are collected by government statistical agencies. Nonetheless the data clearly indicates that income measured by conventional accounting techniques does not provide valid information. Even though individuals may realize that inflation distorts financial results, the amount of distortion is not known and decision makers can be misled.

An understanding of the two types of adjustments which are shown in Figure 2 is fundamental to determining the effects of inflation. The second adjustment, which deals with restating incomes in dollars of constant purchasing power, is the more generally understood since it

reflects the decline in the value of the dollar or the increase in the general cost of living. The first adjustment, which makes provision for the maintenance of capital assets, is often ignored, and as a result the effects of inflation on capital and savings are often not understood.

## **The Impact on Industry Sectors**

A further factor during inflation is the variation of the impact of inflation on different industries and on individual firms. This depends on:

- The capital intensity of the industry.
- The amount of inventory required per dollar of operating profit.
- The financial structure and the extent to which the burden of maintaining fixed assets and working capital can be shared with creditors.

The varying impact of inflation on the reported net income of major industry groups is shown in Figure 3. This compares total incomes of each industry as reported for the years 1971 to 1975 with those incomes adjusted for the impact of inflation. The average reduction in total income over the five years as a result of the inflation adjustment was 58%. The estimates are based on a sample of 279 large Canadian non-financial companies.<sup>2</sup>

## **Productive Capital**

The community at large loses from inflation. When the need for capital maintenance is ignored in determining income, then capital will in effect be taxed or distributed and consumed as income. If the extent of the impact of inflation is not realized, businesses and individuals may distribute and consume to a greater extent than would otherwise be the case.

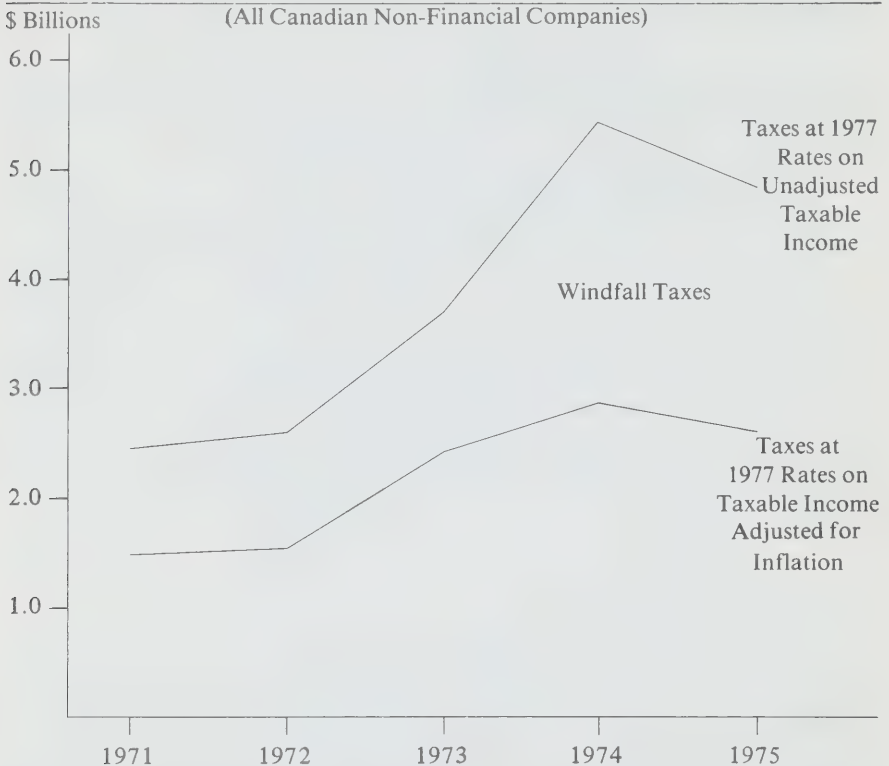
By failing to add to capital, or to allow for capital maintenance, the total productive capability of the economy is reduced as is its ability to provide income and wealth for all sectors. For Canada, as elsewhere, productive capital is needed to create employment and to bring about the innovation and improvement in productivity which produces increases in real incomes. The negative impact of inflation on business capital formation is costly for Canadians.

## **Inflation and the Tax System**

Though taxable income usually differs from the net income reported in financial statements, taxes on business and individuals are levied on the basis of historical costs of assets used in the period. As a result, tax revenues to government from business and from investors are subject to the same kind of distortion as reported net income.

When net income is overstated because of inflation, taxes increase not merely in current dollars but also in real terms. This produces a revenue windfall to government and it increases the share of aggregate output which is allocated to governments from the private sector. The windfall, which is essentially a tax on capital, is illustrated in Figure 4.



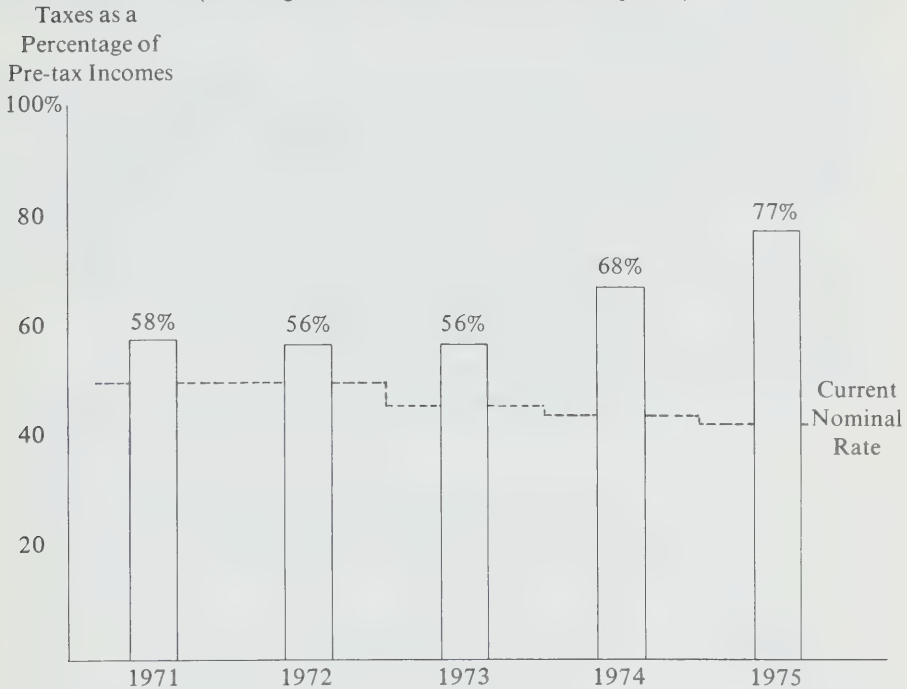
**Figure 4****Inflation and Taxes****Estimated Federal and Provincial Windfall Taxes Resulting from Inflation 1971-1975**

Source: Bossons, *Impact of Inflation*, Table 41, and staff estimates.

The result of this effect of inflation on taxes is to increase the effective tax rate on inflation-adjusted pre-tax income. Figure 5 illustrates that between 1971 and 1975 the effective tax rate for the sample of large, non-financial businesses rose from 58% to 77%, even though the average nominal corporate tax rate in Canada dropped from approximately 51% to approximately 45%<sup>3</sup> during this time. The tax reductions legislated in the early 1970s were therefore effectively reversed by inflation.

**Figure 5****Inflation and Tax Rates****Effective Tax Rates on Adjusted Pre-Tax Incomes 1971-1975**

(279 Large Canadian Non-Financial Companies)

Source: Bossons, *Impact of Inflation*, Table 38.

Note: Effective tax rates are ratios of total taxes (including deferred taxes) to pre-tax income adjusted to reflect the net impact of inflation.

**Impact on Different Industries**

As previously noted, the burden of inflation falls unevenly on industries and in turn the taxation burden falls heavily on those industries most severely affected by inflation. This is shown in Figure 6 using the effective tax rates on earnings adjusted for inflation.

For both large and small business, taxation has a serious negative impact during inflation in that it represents a withdrawal of working capital which inhibits business growth and innovation. The problem is especially acute for smaller businesses because of the difficulties such firms may have in financing additional capital.

For the individual, some of the effects of inflation were recognized through indexation in personal taxation. However, indexing has not been extended to include the effects of inflation on capital gains, unincorporated business income, or the reduction in real value of individual or business capital and savings.

## The 3% Inventory Deduction

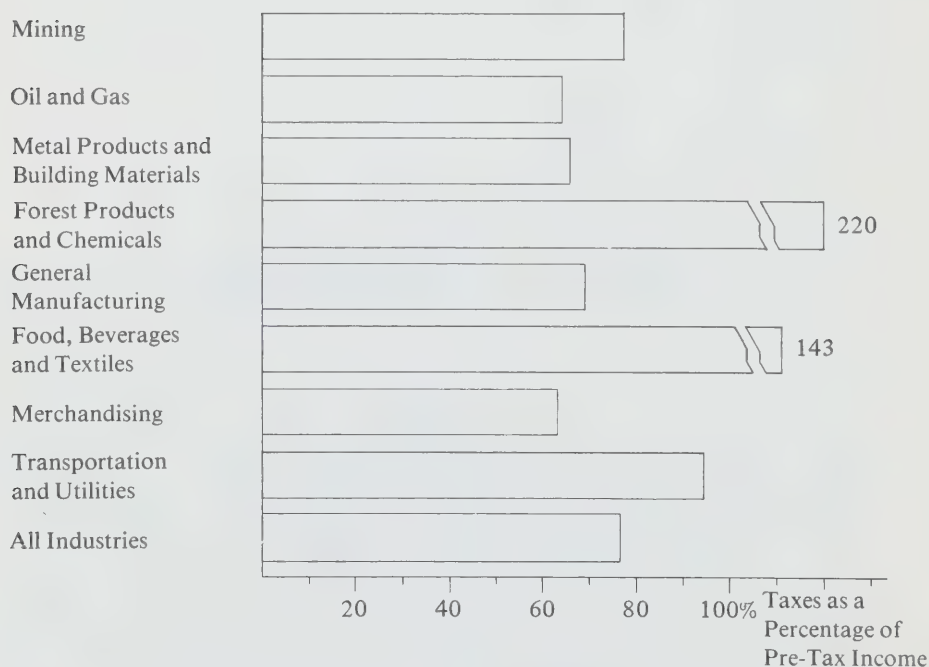
The recent 3% inventory deduction proposed in the Federal and Ontario budgets will provide some relief against the effects of inflation on the higher cost of inventories. However, it is not a comprehensive response to the problem. An estimate of the extent of the relief provided is set out in Table 1.

The proposed 3% inventory adjustment does not take into account the varying cost increases which are experienced by different industries nor does it reflect the fact that some businesses rely on creditors to finance the increase in their investment in inventories. Consequently, the proposed 3% inventory deduction is only a rough measure for providing

**Figure 6**

### **Inflation and Tax Rates of Industry Sectors 1975 Effective Tax Rates by Industry Sector**

(279 Large Canadian Non-Financial Companies)



Source: Bossons, *Impact of Inflation*, Table 39.

relief. The effect that some of these factors have on the extent of the proposed relief in different industries is illustrated in Figure 7.

The 3% deduction provides more relief to firms in merchandising, transportation and utilities than it does for those in manufacturing and processing. There could also be large variations in the effects on firms in the same industry, caused by different methods of financing invento-

**Table 1**

**The Effects of the 3% Inventory Deduction on Taxes Payable by Corporations (All Canadian Companies)**

(\$ millions)

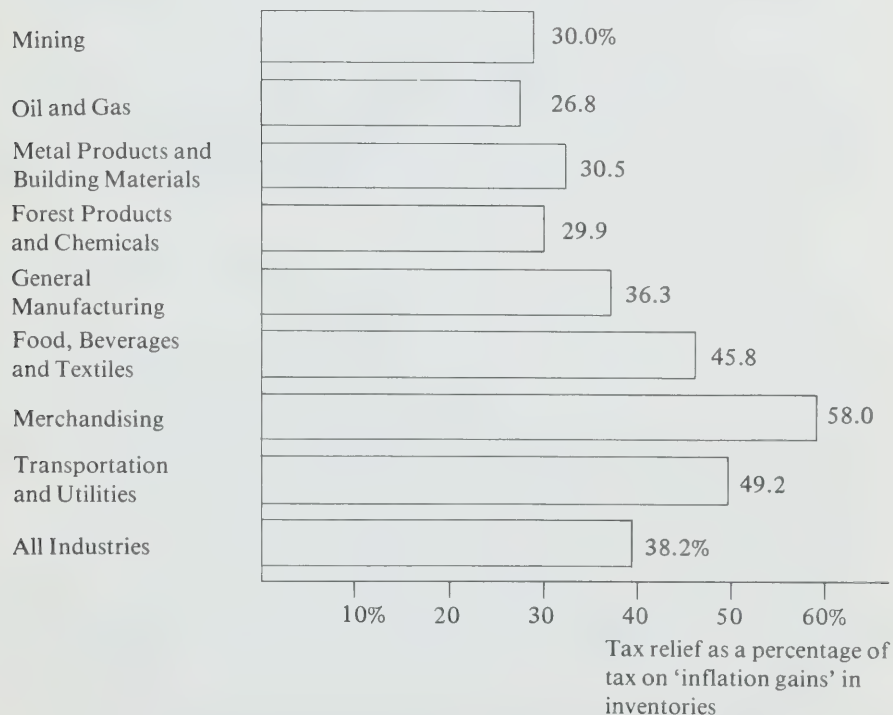
	Total Federal and Provincial Taxes	Ontario Taxes
Tax on 'inflation gains' in inventories	\$900	\$100
Tax relief from 3% deduction	350	40
Deficiency in tax relief	\$550	\$ 60
Percentage of relief provided by the 3% deduction	39%	

Source: Staff estimate based on 1975 taxes of 279 large Canadian non-financial companies, projected using Statistics Canada data.

**Figure 7**

**The 3% Inventory Deduction  
Extent of Relief Provided by Industry Sector**

(279 Large Canadian Non-Financial Companies)



Source: Bossons, Impact of Inflation, Table 48, and staff estimates.

Note: Estimates based on 1975 taxes.

ries. In summary, some businesses may receive too little relief while others get more than their share.

## Capital Cost Allowances and Investment Tax Credits

The present system of capital cost allowances and investment tax credits provides business with cash flow benefits which can be used to offset the higher costs of fixed assets. This was not the original intention. These policies were to stimulate investments in certain industries and regions. They cannot be expected to perform this function in addition to offsetting the effects of inflation on capital-intensive industries.

Without information about the financial problems of maintaining productive capacity of plant, machinery and equipment, government will find it difficult to assess how such measures as these provide an effective incentive for investment and expansion.

## Recognizing Inflation Adjustments in Taxes

The federal government has estimated that the 3% inventory adjustment will reduce federal revenues by about \$300 million in the first full year of operations.<sup>4</sup> It could, therefore, reduce combined federal/provincial revenues by about \$400 million including Ontario revenue of \$40 million to \$50 million.<sup>5</sup> If full inventory relief based on current costs were introduced, the additional cost in 1978 could be approximately double that of the 3% inventory adjustment. This might be reduced somewhat by an offsetting adjustment for debt financing.

If existing capital cost allowances were supplemented by an adjustment for the current cost of fixed assets, tax relief would be effectively provided for those businesses which suffer the greatest burden during inflation. However, any attempt to utilize current cost as a basis for taxation would have to ensure an objective method of calculation, perhaps involving the use of an appropriate index.

For small business, tax relief related to inventories and working capital is likely to be of greater benefit than increased capital allowances since smaller firms are generally less capital intensive.

The potential impact of various tax adjustments is described in more detail in Chapter 3, *Inflation and Taxation*. It is shown that it would be difficult for governments to sustain the revenue loss resulting from a correction of taxable income for the full effects of past inflation. The revenue loss to government could be minimized, however, by the recognition of future inflation only.

If the effect of inflation on inventories and fixed assets were to be fully recognized in taxation, an adjustment should be made to recognize funds that may be available to business from borrowings assuming that the firm's current ratio of equity to non-equity financing is maintained.<sup>6</sup>

## Tax Relief for Inflation Provided by Other Countries

With few exceptions, tax relief for the effects of inflation in other countries has been directed to inventories and fixed assets. For inventories the relief is normally intended to recognize the price increases in inventory. Fixed asset relief is usually provided in the form of accelerated capital cost allowances or investment tax credits.



- In the United Kingdom, the deduction of a special inventory reserve is permitted equal to the increase in the cost of inventories during the year. In addition, accelerated capital cost allowances of up to 100% in the first year have been permitted for machinery and equipment.
- In the United States, the LIFO (last in, first out) method of inventory valuation has been allowed for tax purposes for almost forty years. However, no specific measures have been provided to recognize the problem of capital asset replacement.
- In Australia, a special inventory reserve is permitted and it has been recommended by the Mathews Committee<sup>7</sup> that capital cost allowances be based on the replacement cost of assets.
- In Sweden, a provision exists to permit businesses to allocate funds to an investment reserve. Companies may put 40% of their pre-tax profits in a tax exempt investment reserve fund, 46% of which must be deposited interest free with the government. The immediate benefit of this provision is to provide additional equity and if the investment reserve is used to acquire capital assets under conditions prescribed by the government, some of the funds can be received back free of tax.

## **The Benefits and Implications of Accounting for Inflation**

Inflation affects the behaviour of each sector of the economy, and deficiencies in financial and economic measurement affect government policy, capital financing decisions, business decisions and the general public. The Committee has assessed the potential benefit and implications of inflation accounting for each sector.

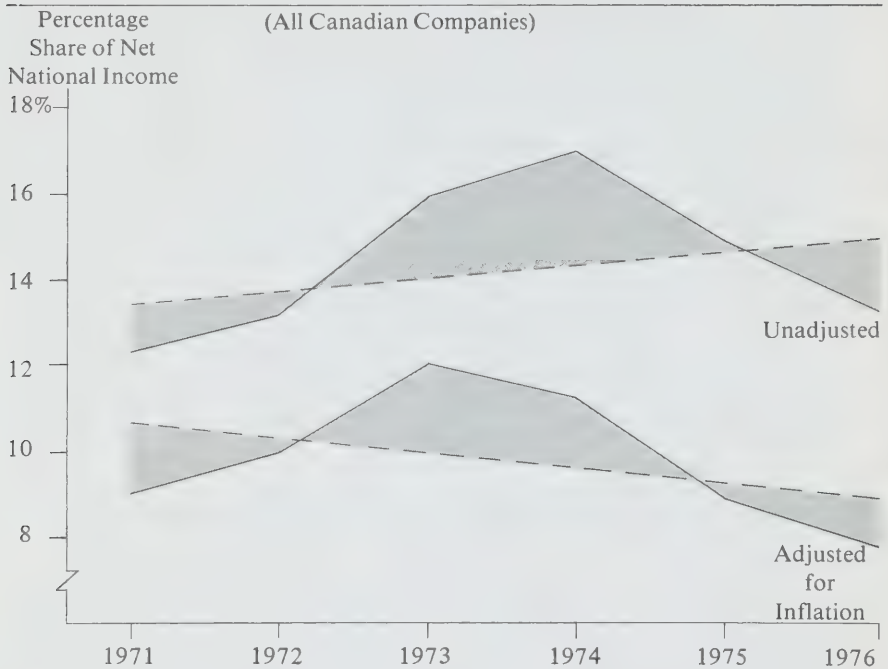
### **Government Policy**

Inflation accounting should have a constructive impact on government in economic policy, general statistics, taxation and regulations. Economic policy is formulated in part from a collection of business and industry data. Data which reflect the impact of inflation should potentially improve the accuracy and quality of policy decisions.

The National Accounts<sup>8</sup> are prepared in part using financial reports of business and so reflect the distortions in financial statements. A cursory inspection of profit figures reported in the National Accounts would lead to the belief that corporate profits had more than doubled between 1971 and 1976. In fact, real corporate pre-tax profits in 1976 were virtually the same as in 1971 and after-tax profits were lower. Moreover, pre-tax corporation profits adjusted for inflation were a substantially lower share of net national income than as reported in the National Accounts. This is shown in Figure 8.

**Figure 8**

**Inflation and Net National Income —  
Pre-Tax Corporate Profits as Share of Net National Income,  
Unadjusted and Adjusted 1971-1976**



Source: Unadjusted figures from Statistics Canada, National Income and Expenditure Accounts, (Catalogue 13-004) – Adjusted figures are from Bossons, Impact of Inflation, Table 22.

Note: Dashed lines are six-year time trends.

The design and application of an appropriate tax system could be aided by adjustments for the effects of inflation on a business which would provide information concerning:

- The uneven burden of inflation on industry sectors and the effects of existing taxation policy during inflation on different types of firms and industries.
- The degree to which inflation reduces or expands the impact of capital cost allowances, tax credits or other incentives or allowances.
- The extent to which tax revenues of government represent unintended or windfall gains resulting from inflation.

## Capital Financing

Inflation provides business with an increase in cash flow from operations. At the same time, larger amounts of cash are required to maintain inventory levels and to finance capital expenditures.

Up to 1975, higher taxes on increased reported profits and increased dividends contributed to growing liquidity pressures. The need for more cash was initially met by short-term borrowings and subsequently through long-term debt. A growing general awareness of the inflation risk and a lack of confidence in business earnings adversely affected the equity markets as a source of available capital.

The shift in capital from business investment to safer alternatives, particularly by small investors, reduced available capital and narrowed the ownership of equity investment, thus increasing the relative importance of large financial institutions. This reduced the availability of financing opportunities for the medium or small businesses, where the number of equity issues declined noticeably. These small and medium size firms are an important source of innovation, growth and employment in Ontario.

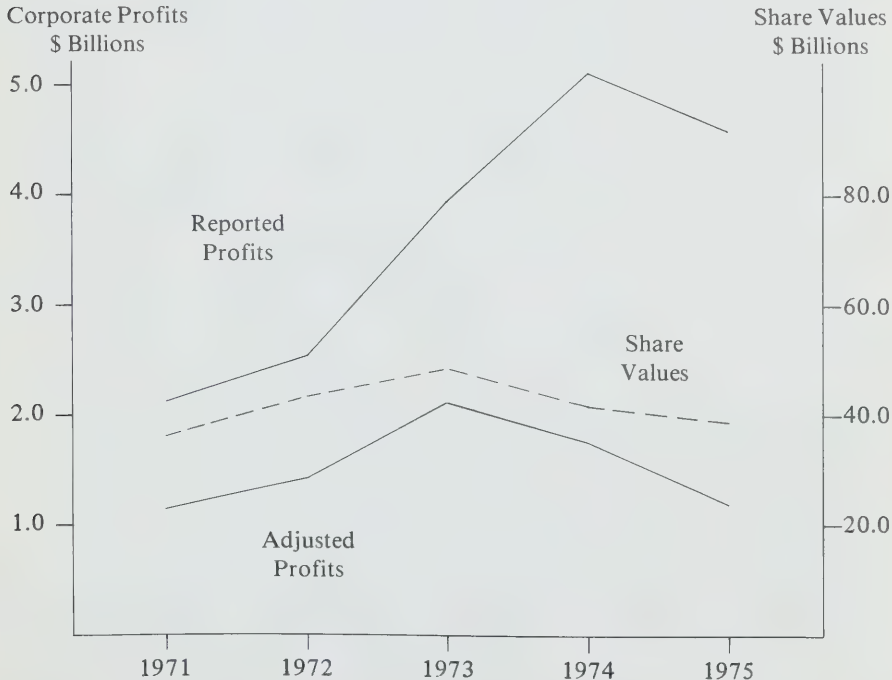
Disclosure of the effects of inflation on business may increase the breadth of the equity market and availability of new equity funds for capital financing. Disclosure of the information itself does not improve the prospects of the firm, but it may reduce uncertainty and increase

**Figure 9**

### **Inflation and Stock Prices**

### **Comparison of Canadian Share Values with Reported and Adjusted Corporate Profits 1971-1975**

(279 Large Canadian Non-Financial Companies)



Source: Bossons, *Impact of Inflation*, Table 62.

Note: Share values represent outstanding shares multiplied by average share prices.

credibility. If inflation accounting improves the understanding of the problem in the terms of government, labour and general public attitude, this could potentially contribute to a more favourable business climate and an increase in investor confidence.

Disclosure of the effects of inflation is unlikely to affect the share prices of individual firms in the short term. Experience in the United States with the replacement cost disclosure required by the Securities and Exchange Commission has had no discernible effects on share prices. However, whether such disclosure would affect share values in the long term is uncertain. During the past few years, the trend in share prices has followed adjusted earnings more closely than reported earnings. This is illustrated in Figure 9.

## Business Decisions

Disclosure of the effects of inflation by business is unlikely to affect the normal management decision making process. External financial statements are seldom used for day-to-day operational purposes. For the small firm, financial statements are usually prepared only for bankers and for taxation and statutory purposes.

The pricing policies of business are also unlikely to be affected by the disclosure of the effects of inflation in financial statements. Prices are related to market and competitive factors or to government regulations. Where prices are unrelated to market factors inflation accounting will provide useful information concerning current cost and price relationships.

The disclosure of the effects of inflation reduces uncertainty and improves the attractiveness of business investment. It should enhance the capital formation process and increase the availability of capital for business expansion.

Taking the effects of inflation into account, many businesses effectively paid dividends out of capital during 1974 and 1975. Disclosure of the effects of inflation will help business explain to its shareholders why dividends may not follow the trends in reported earnings during inflation and thus maintain credibility and confidence.

Disclosure of the effects of inflation will identify problems in the underlying profitability of the firm and will encourage management to seek ways of improving productivity.

As inflated profits were reported in recent years, some businesses received the false impression that all was going well. In the absence of external pressure to improve poor performance, expenditures may have risen unnecessarily. Other businesses understood the problem clearly and disclosed the effects of inflation in their annual reports. But such disclosure was made by only a small minority of businesses.

The absence of an accepted system of financial disclosure for the effects of inflation has contributed to the hesitancy on the part of individual firms to pioneer a form of disclosure of their own, particularly when there was no assurance that other firms would follow suit.



## The General Public

All sectors of the economy are affected by inflation. It poses a serious threat to social stability by challenging widely held social values, attitudes and expectations. It can introduce conflict and division in society as each individual attempts to maintain his social and economic standing.

Business occupies a sensitive position. The public pays more for goods and services, while business reports record levels of earnings. In the face of a public outcry for higher incomes and lower prices, the illusory inflation-created profits reported by conventional accounting rules engender pressures on government for control of business profits.

Recent studies have shown that the level of understanding of business on the part of the general public is extremely low and has remained substantially unchanged for the past decade.<sup>9</sup> Regardless of their occupation or profession or the region in which they live, Canadians have an inadequate level of knowledge of how a business works, the role of profit, the difference between sales and earnings, and the relationships of cash, profit and investment.

The public does not read financial statements but they hear about them through discussion and on television, radio and in the newspapers. If prices and profits rise together, this naturally invites questions. It is accordingly important that financial reports be made less misleading and that financial reporting in the media be made enlightening.

The one financial indicator that might have some meaning to the average Canadian is 'return on investment', as it provides a figure that can be compared with interest on bank deposits or Canada Savings Bonds.

Disclosing the effects of inflation in the financial reports of business is a small but significant step toward clarifying the public perception of business. It must be recognized, however, that this change can address only a small part of a wider problem of public perception of the role of business in society.

To change public perception will require more fundamental and perhaps structural action including a more effective form of accountability and disclosure to the public. This might include such initiatives as:

- A more adequate description of profit and its role in investment and in generating wealth.
- An effective accounting of results which describes the financial and tangible benefits of business operations and adjusts for the effects of inflation.
- An improvement in communications and accountability of business including a more explicit description of its overall purpose.
- Improved education on the role of business and efforts toward the broadening of its ownership by a larger number of individual Canadians.



## The Outlook

If recent levels of inflation continue in Canada the future of capital-intensive industry in the private sector is seriously threatened. As prices continue to rise, greater amounts of financial capital are required to maintain the same level of operations. As the debt/equity ratios of business deteriorate, liquidity becomes a problem. Over the longer term this contributes to the decline of productive activity and the loss of opportunity for new investment. It becomes more difficult to finance the rebuilding of productive plant and equipment.

In Australia, the Mathews Committee concluded that the combination of taxation and inflation were not consistent with the continued existence of the private sector.<sup>10</sup> In Britain, where a system of price controls was added to these two elements, the combination of the three has been referred to as 'The Doomsday Machine'.<sup>11</sup>

During continued inflation no capital-intensive industry can survive in the private sector unless important structural changes occur which will resolve its liquidity problems. To stay alive, a business runs on its capital. The message for the economy as a whole is not different.

It is not just in business where the erosion of the value of capital reduces our ability to survive. Private savings enable individuals to take responsibility for the future—retirement, death or some other crisis. When these savings are eroded substantially by inflation the incentive to save is reduced, causing individuals to look more to government for protection and less to personal initiative.

The general economic effects of inflation are seen in the erosion in the real value of capital of both individuals and businesses. An accurate and reliable measure of this problem will contribute to our ability to address the tough decisions that are required to reduce inflation and restore the economy to good health.

## Inflation Accounting

For many years businessmen and accountants have been aware that recording items on the basis of historical costs has led to distortion in financial measures during periods of dramatic price changes. Even a low rate of inflation over an extended period will produce distortions. With each wave of inflation, inflation accounting methods have been discussed and proposed, but not until recently was the rate of inflation severe enough to demand an alternative to the conventional accounting system.

The initial effort of the accounting profession was general price level accounting (GPL). This method was introduced in the United Kingdom in early 1973, and shortly thereafter similar proposals were made in the United States, Australia and Canada. Under this system, financial statements are restated in terms of current purchasing power. This is achieved by using a simple general price level index. The method had the advantage of being easy to apply and of maintaining the objectivity of the existing financial statements.

In 1974, concern about the implications of general price level accounting led the British Government to appoint an Inflation Ac-

counting Committee under the chairmanship of F.E.P. Sandilands.<sup>12</sup> This committee recommended an alternative known as current cost accounting—where assets are shown at their value to the business—normally current replacement cost—and provisions are made for the replacement of assets consumed in the productive process in arriving at income. The value of capital is maintained.

By early 1976, there was general agreement that GPL accounting, although a useful interim measure, was not the final solution. Modified forms of the Sandilands concept of current cost accounting were recommended in the United Kingdom, Australia and by the Securities and Exchange Commission in the United States.

## Conclusion on Inflation Accounting

After considering all of the foregoing, there were two alternatives finally considered by the Committee. One was the adoption of a universally accepted and comprehensive system of inflation accounting. The other was an interim method of financial disclosure which would deal concisely with the effects of inflation on a business. The Committee chose the second alternative for the following reasons:

- There remains a diversity of views about the appropriate methods of inflation accounting and it would, therefore, be difficult for Ontario and Canada to adopt a specific inflation accounting system of a comprehensive nature at this time. Proposals being made in other countries will continue to change, and Ontario would be well advised to await the decisions made in other jurisdictions with which it has strong economic and business ties.
- The accounting profession has traditionally accepted responsibility for developing accounting principles. In recent years, it has examined the various inflation accounting methods being proposed. At present, the Accounting Research Committee of The Canadian Institute of Chartered Accountants has three projects under way. These concern the purpose and objectives of financial statements, the problems of implementation of current value accounting and the methods of current value accounting to be used. While the projects are not yet complete, it is expected that when they are, the Accounting Research Committee will decide what action, if any, should be taken toward adopting a comprehensive inflation accounting system.
- There is an urgent need for better information on the effects of inflation on business. This does not require a comprehensive change in the present accounting and reporting system, or a commitment to a longer-term change in accounting principles but simply the preparation of inflation-adjusted data, supplementary to conventional reporting.

## Proposed Financial Disclosure

Because inflation affects the cash requirements of a business and its liquidity, the effects of inflation are best measured in terms of their impact on the funds available for distribution to the owners or for expansion of the business. The Committee concluded that a separate 'Statement of the Effects of Inflation' should be included as part of the financial statements of a business, setting out the effects of inflation in terms of such funds available. It was also concluded that greater use of relative measures of performance such as return on investment would help to illustrate the effects of inflation on business.

Disclosure of return on investment could contribute to an improved understanding by the public of business performance. Rates of return on investment could be compared with generally understood investments such as bonds and savings accounts and would, therefore, provide a better public insight into how well business does.

The absence of a generally agreed upon method of determining return on investment has resulted in some hesitation by business in disclosing these figures. We have suggested that return on capital employed be used as a basis for reporting return on investment.

In proposing a 'Statement of the Effects of Inflation' on funds available, the Committee also considered the alternative of an adjustment to net income to reflect the impact of inflation. Varying concepts of capital and income are now being discussed. It would, therefore, be best to focus on potential cash requirements until universally accepted definitions of capital and income are agreed upon.

In this Report, explanations of the effects of inflation on business have utilized the conventional terminology such as 'adjusted earnings' because such descriptions have been used in other places and it was believed that terms such as adjusted net income would be understood. For financial statement purposes, however, the Committee believes that the effects of inflation are best described in terms other than the accepted and normally used measurement conventions of net income—'funds available for distribution or expansion'.

An illustration of the proposed method of financial disclosure is set out in Exhibit I. Its purpose is to describe how funds from operations should be allocated to ensure the maintenance of business capital during inflation. First, it shows the funds required to finance the original cost of productive assets. This is the historical cost depreciation of fixed assets. Second, it describes the funds required to finance the increased cost of maintaining operating capacity—for inventories and for plant, machinery and equipment. These requirements are reduced by the extent to which additional funds may be available from borrowings assuming that the ratio of equity to non-equity capital is maintained. The final result is an amount which represents the 'funds available for distribution or expansion'.

## Exhibit I

### Statement of Effects of Inflation on Funds Available for Distribution or Expansion

Funds generated from operations (from statement of changes in financial position)		\$150,000
Funds required to finance original cost of productive assets (historical cost depreciation)		<u>50,000</u>
		100,000
Funds required to finance increased cost of maintaining operating capacity (Note X)		
Inventories	\$25,000	
Plant, machinery and equipment	<u>45,000</u>	
	70,000	
Less additional funds which may be available from borrowings	<u>20,000</u>	
		<u>50,000</u>
Funds available for distribution or expansion		<u>\$ 50,000</u>

#### Notes to Financial Statements

- Note X: a. The increased cost of replacing inventories (\$25,000) represents the difference between the historical cost and the current cost of goods sold at the date of sale.
- b. The increased cost of maintaining the operating capacity of productive assets (\$45,000) represents the difference between depreciation determined on an historical cost basis and depreciation indexed for the effects of inflation, using the business investment component of the GNE Implicit Price Index.
- c. The extent to which additional funds may be available from borrowings (\$20,000) is based on the ratio of equity to non-equity capital at the beginning of the accounting period on the assumption that this ratio is maintained.

## Calculations

The proposals for financial disclosure are based on three separate calculations. These are as follows:

#### • *Inventories*

This adjustment represents the additional funds required to finance the increased cost of inventories. It is based on the current cost of goods at the time of sale and can be determined from present accounting records.

#### • *Fixed assets*

This adjustment represents the portion of additional funds, relating to the current reporting period, which are required to provide for the maintenance of the operating capacity of fixed assets (excluding land and buildings not used in primary or manufacturing and processing operations). The adjustment is calculated as the difference between depreciation calculated on the basis of historical costs and depreciation



adjusted by use of a general index for the effects of inflation.<sup>13</sup> The use of a general index is recommended at this time because of the lack of feasible alternatives and because it is easy to understand and easy to calculate. Adjustment factors more relevant to the circumstances of individual enterprises, such as industry or asset specific indexes, may be developed for use in the future.

#### • *Financing*

To the extent that the owners of the enterprise utilize non-equity capital to finance the operations of the business, they will not have to contribute all of the additional capital requirement themselves. The ratio of equity financing should be based on the ratio existing at the beginning of the accounting period.

### Cost and Feasibility

In considering the various methods of implementing a system of inflation accounting disclosure, two important criteria were identified:

- The system should be easy to implement, commensurate with obtaining a reasonable degree of accuracy and relevance.
- The additional cost to business in preparing the information should not be excessive.

The proposed system of disclosure meets these criteria. No significant changes to current accounting practices will be required. The information required to calculate the adjustment in respect of inventories will be extracted from current accounting records or by relatively simple adjustments to historical cost calculations. In the case of fixed assets, the use of a general index will make the calculations simple to perform. In addition, the adjustment in respect of financing, being based upon balance sheet ratios at the beginning of an accounting period, will also be simple to perform.

### Applicability

All manufacturing, processing, trading and other operating business enterprises which are materially affected by inflation should disclose the degree of that impact in their annual financial reports. The disclosure should also be made by non-incorporated businesses, crown corporations and commercially-oriented government boards and agencies.

Some businesses, such as service industries and those which do not have major investment in inventory or fixed assets, may not be affected by inflation. In addition, certain types of assets, such as land, office buildings and mineral resource assets should be excluded from the inflation adjustment calculations, either because of their nature or because there are complex and still unresolved problems in determining the funds required to maintain their operating capacity.

Another factor in determining applicability will be the method by which the government chooses to implement disclosure should it decide to do so. If disclosure were required through regulations to the Securities Act, for example, then the only companies required to disclose



would be those whose securities are publicly traded.

In any event, the government should encourage all enterprises which are affected by inflation to disclose the impact on their operations.

## **Objectivity**

The proposed method of disclosure is based on objective measurements of the effects of inflation. The methods and calculations have been applied in practice. The areas of measurement normally associated with subjective judgment and valuation of assets have been minimized by the use of an index.

Some estimation may be required in determining the adjustment for inventories. However, the judgment required should not exceed that used in valuing inventories for conventional accounting purposes.

For fixed assets, the adjustment is based on a general index published by Statistics Canada and the financing adjustment is calculated by reference to previously established balance sheet ratios. In addition, the information included in the 'Statement of Funds Available for Distribution or Expansion' is sufficiently objective to be audited if business decides that this is necessary.

## **Recommendations— Ways and Means of Implementation**

In concluding that there is urgent need to measure the effects of inflation in a uniform and understandable manner, the Committee has proposed a method of financial disclosure in the form of a 'Statement of the Effects of Inflation on Funds Available for Distribution or Expansion' to be included with the financial statements of a business.

To be useful, such information must be provided by a broad constituency so that it is available for use and interpretation by governments, investors, the general public and business itself. Accordingly, the Committee has set out two alternative methods by which the Government of Ontario may bring about the adoption, as an interim measure, of the disclosure of the effects of inflation.

In considering the ways and means of implementing a program of financial disclosure of the effects of inflation, it should be recognized that:

- A uniform method of financial disclosure is required to enable comparison, analysis and interpretation of the effects of inflation by decision makers.
- Financial disclosure should be made on a broad basis, including all business firms which are affected by inflation.
- Information on the effects of inflation should be disclosed by business at the earliest possible date.
- The form of disclosure should be amenable to change and improvements with experience.
- The developments and practices of jurisdictions other than Ontario should be recognized.

- The first-hand knowledge and experience of the business community and the accounting profession should be fully utilized.

Two alternative courses of action are proposed. The first would place the responsibility on business for initiating financial disclosure of the effects of inflation. The government would recommend to business that they make this disclosure on a uniform basis as soon as possible. In the second choice, the Government of Ontario would initiate a program of implementation including the drafting of regulations to the Securities Act requiring financial disclosure after a one-year period of experimentation, exposure and discussion.

## Alternative One

That the Government of Ontario endorse the method of financial disclosure proposed in this Report as an interim approach to measure the effects of inflation and further that the government recommend to business that it include a 'Statement of the Effects of Inflation' with its financial statements for fiscal years ending after December 25, 1977. Further:

- That financial disclosure of the proposed method be made by all firms affected by inflation.
- That the information be provided on a uniform basis by business until a more comprehensive method has been developed and proposed by the accounting profession or until such disclosure is considered to be no longer necessary.
- That the experience gained from this interim method of disclosure be used in the effort to develop a more appropriate accounting system during inflation.

## Alternative Two

That the Government of Ontario initiate a uniform method of financial disclosure of the effects of inflation by way of regulations to the Ontario Securities Act, requiring such disclosure for fiscal years ending after December 25, 1978. Further:

- That draft regulations to the Securities Act of Ontario be used as an exposure draft during a discussion and experimental period.
- That the government recommend that the disclosure method suggested in this Report be used by business in Ontario during 1977 as a basis for experimentation and discussion.
- That business and the accounting profession be invited to join this initiative.
- That depending upon the experience gained with 1977 financial disclosure, the draft regulations to the Securities Act be modified, improved or changed so as to be implemented for fiscal years ending after December 25, 1978 for those companies which are publicly traded.

In setting out each of the alternative methods of implementation, the Committee considered certain advantages and disadvantages.

In the first alternative, the government would be providing leadership, recommending a uniform method of financial disclosure and a call upon business at large to make this disclosure at an early date. The first alternative also follows the customary practice of relying on the private sector to make changes in its method of financial reporting. If such a start were made this year on a voluntary basis, the Committee concluded that this would be the most effective and least costly approach to implementing financial disclosure of the effects of inflation.

No method of financial disclosure will be perfect, and improvements will have to be made with experience and practical application. There is considerable diversity in the problems encountered by different industries.

In choosing the second implementation alternative by way of the Ontario Securities Commission, the government avoids the risk that business will continue to hesitate in making disclosure of the effects of inflation. Through draft regulations to the Securities Act, a period of discussion and experimentation can be ensured during 1977 and 1978. In this way, experience gained from disclosure during this period could be used to modify, change and improve the proposed method set out in the draft regulations. The government's decision on the ultimate form of financial disclosure and its method of implementation in 1978 could take into account this experience along with other initiatives by the accounting profession and the business community in Ontario.

## **Inflation and Government Statistics**

The Committee also recommends that the Government of Ontario, along with other governments, consider the adoption of appropriate adjustments for the effects of inflation in economic statistics and other financial and economic information relating to the economy and to business. These adjustments should be included in public statistics produced by government and in the statistics utilized in policy formulation relating to taxation and other economic decisions.

To provide a reliable and effective data base for information on the effects of inflation, consideration should be given to the advisability of including adjustments for the effects of inflation as information to be submitted on the corporate tax return.

## **Conclusion**

The disclosure of accurate financial and economic information will play a major role in the future fight against inflation. It will enhance business performance, broaden understanding of business activities, and assist the formulation of economic policies and programs.

With the cooperation of government, business and the accounting profession, this task can proceed in an orderly and effective way toward the achievement of broader and improved disclosure goals. There is no alternative to a cooperative program. No one group has the capacity, the understanding or the resources to undertake this task alone.

Implementation must be careful, determined and orderly but carried out in an action-oriented manner. The effects of inflation will not await the development of the ideal system of accounting. That is why action is required now.

# Minority Report

*by Gordon Milling*

After careful consideration of the material prepared for the Committee, I find myself unable to concur in the conclusions reached by the majority. The Committee advances two alternative courses of action open to the Government of Ontario, either or both of which would involve an explicit commitment to a uniform system of inflation accounting methods. I would recommend a third course of action which may be summarized as follows:

That the Government of Ontario refrain from endorsing the method of financial disclosure proposed in the report, and instead, consider submitting the proposals to public scrutiny and internal study, especially with regard to the impact on income distribution of any generalized change in accounting objectives and techniques.

It is true, and to be regretted, that the Committee's terms of reference may be so construed as to preclude the above alternative. This member feels, however, that an inquiry of the present type and scale should not simply assume the existence of: 'a need to adopt principles of accounting based not only on the traditional cost concept but also on the current replacement value . . . (and) for uniform financial disclosure based on such revised principles of accounting. . . .' One notable consequence of this assumption is that the report fails to deal adequately with arguments against uniform inflation accounting, many of which were raised in submissions from highly responsible corporations and professionals. In short the terms of reference and the report itself stress methods of change when the need for change is still very much open to question.

The Committee proposes disclosure of inflation impact in three areas of financial reporting: value of inventories, depreciation of fixed assets, and financing costs. It is implied that these or similar adjustments are not widely employed by businesses; that in any case adjusted data are not revealed to the public; and that these deficiencies in accounting practice are at the root of countless bad decisions on the part of managers, investors, governments, labour unions and the public in general.



Much is claimed for a revised disclosure system which would provide everyone with the necessary information for intelligent economic judgment and action.

Admittedly, double-digit inflation in itself is evidence of miscalculation on an alarming scale; undoubtedly it tends to breed judgmental errors at all levels of economic activity. However, there is much evidence that corporate reaction to inflationary realities is hard-headed and effective. Certainly it involves no time-lag comparable to that observed in the 'catch-up' response of unions. If (as I believe) our recent inflation was generated in part by external forces and in even larger part by inappropriate government policies in the early 'seventies, the fact remains that it manifested itself first in a succession of price increases which eventually translated into cost increases, much speculative activity, a wage reaction, and escalation of government revenues and expenditures. In this process it was precisely the corporate sector, now represented as a victim of inflation, which profited most immediately from the situation. By 1974 corporation before-tax profits accounted for some 17 per cent of national income compared with a postwar average of 14.5 per cent. Furthermore, companies generally appear to have assessed their cash-flow prospects sufficiently well that, with price increases, capital cost allowances and tax prepayments (on inventory gains) their after-tax position could be and was well sustained through the levelling-off period that followed.

We should not be misled by the fact that profits have been partly 'illusory'; the same can be said about all rising incomes in a period of inflation. The 'real' increase in corporate retained earnings has been sufficient to support a much higher rate of expansion than has in fact taken place. Stripped of overstatement in one direction or another, this observation might be seen as central to everyone's concern with the low rate of investment.

What presently restrains investment is neither an absolute lack of funds nor a breakdown in accounting systems. Rather, it is a pronounced slowing of demand, which alone can justify investment in new plant and equipment. The present dilemma stems from a mix of government policies whose purpose is to shift spending from consumption to investment, but which operate so as to undermine consumer confidence and consequently the willingness of business to expand.

Across Canada, a million or so unemployed and underemployed people and their families are forced to reduce their spending. Many others are saving a substantially higher proportion of their incomes, through a higher rate of debt repayment and otherwise. In the face of these realities, the Committee's emphasis on accounting adjustments lacks a certain sense of proportion. At any rate, I am not sufficiently impressed with the supposed benefits of inflation accounting that I can overlook its much more obvious side effects.

As to the disadvantages, I shall refer only to three which I believe are of greatest importance and which are closely interrelated:

#### *Fiscal implications:*

For the Ontario Government to endorse a new system of financial reporting would be to invite a demand from the business community

that the adjusted results be reflected in a revised treatment of business income for tax purposes. The report anticipates such changes even though it stops short of explicitly recommending them. As to the probable effects on aggregate tax revenue and inter-corporate distribution of the tax burden, these consequences have not been thoroughly explored by the Committee, nor could they be in the context of this inquiry. Nevertheless, the urge for tax relief for some businesses is given powerful encouragement, and adoption of the Committee's recommendation would be seen as a commitment to tax revisions which on any other basis would be seen as unwarranted.

*Income redistribution:*

Espousal of the recommendations, especially in the light of their taxation consequences, would place the Government in the position of favouring a special degree of inflation compensation for the corporate sector at the expense of others—and for some businesses at the expense of other firms. While it may be argued that wage-earners, for instance, have been compensated for inflation by cost-of-living wage adjustments and indexing of tax exemptions, it is simply not true that business has been a defenceless victim. Some companies may have been more successful than others in taking advantage of inflationary opportunities, but most have acted as required, with or without utilizing specific accounting techniques, to hedge against the future consequences of their own and others' market behaviour. The Committee's uniform system of inflation adjustments, however well intended, could not fail to bring about a compounding of numerous inflation adjustments that have already been made, routinely and effectively, by most firms. If reflected in corresponding tax changes, reduced wage demands or public acceptance of price increases, the new accounting standards would tend to redistribute income in favour of the corporate sector. It is probable that the redistribution effect would be most pronounced in the short term, and possible that it would be reversed in the longer term. Nevertheless, it is not clear to this member that the public is willing to accept even a short-term sacrifice of personal income to profits. And again, it is unrealistic to expect that increased business saving will be used for productive investment so long as consumer spending is weak, recovery prospects uncertain, and much existing capacity idle.

*Public perception of business:*

From the foregoing it follows that the question of accounting systems as such will be associated in the public mind with the redistributive impact of any officially sanctioned change, and with its success or failure in otherwise yielding any measurable social benefit. Whether or not inflation-adjusted financial reports will serve to improve the public image of business depends in large part on whether the practice is seen to be primarily self-serving. However it is also probable that, from the outset, labour unions will view as suspect any move to restate operating results of corporations in other than historical terms. If credibility of data is important within the collective bargaining process, then I suggest it is important to leave entirely to the parties whether and in what way financial data are to be analyzed in relation to inflationary facts.

Currently, business firms are quite free to reveal to unions any and all information and projections they may consider essential to intelligent bargaining. This process is not likely to be assisted by the introduction of a government-endorsed system of inflation adjustments, whose motive is open to question and which may be seen as irrelevant to the particular industry in any case. On balance, it seems to me the Committee's optimistic expectations for a better public perception of business is not well founded.

# Understanding the Problem

The inflation experienced by Canadians in the past decade has been the most serious in Canada's economic history since Confederation. Since 1965, the general price level has more than doubled. During this period, inflation has been both prolonged and serious in its cumulative effects. The result is that it has become deeply embedded in the expectations of Canadians—whether wage and salary earners, businessmen, consumers or investors. It is widely agreed that inflation will remain a perceptible influence on the lives of Canadians for some years. At best, the future outlook is for continued inflation at lower rates.

Although inflation has always existed to a minor degree, in the past its effects have been less noticeable and less destabilizing. Canadians were therefore not prepared to respond to and live with the effects of the recent more serious inflation levels. They were not equipped to undertake the necessary analysis and evaluation of the effect of inflation, nor concerned about how to modify institutions and take appropriate counter-measures. Conventional approaches to the problem and methods of measuring and analyzing income were at least reasonably adequate when there was little inflation. However, these approaches and methods are unequal to the task of coping with a highly inflationary environment.

The fact that conventional income measurement techniques are rendered obsolete under high inflationary conditions is only one of the many effects of a severe bout of inflation. But accurate measurement of income is itself a necessary prerequisite to understanding the nature of the problems created by inflation and to dealing with them. The continued use of previously appropriate measurement methods does not assist policy makers to arrive at effective counter-measures to the effects of inflation. More important, it also introduces misleading information into the system which can result in the continuation or development of policies which reinforce inflation or which worsen the economic costs of inflation.



## Nature of the Problem

Within the field of the study, there are two types of problems: the measurement problem (how to measure real income) and the impact of inflation on decision makers. Both of these problems must be addressed.

## Measurement

Under inflation, money becomes an imperfect measuring device. It is worth what it will buy at any given time, and in an inflationary situation, the purchasing power of money changes from period to period. This means that income expressed in current dollars is not comparable from year to year.

Consider the case of a wage earner who had after-tax wage earnings of \$13,000 in 1975 and \$14,000 in 1976. Between 1975 and 1976, The Consumer Price Index rose by 7.5%. As a result, his 1976 wages would buy only the equivalent of \$13,023 in 1975 dollars. His \$1,000 raise was almost entirely eaten up by the increase in prices.

Inflation has an additional impact on net income from capital investments, even in current dollars. The added impact arises from the fact that the real value of capital as well as income is eroded by inflation and therefore it is necessary to take both types of erosion into account in measuring real income obtained from capital.

As an example, assume that the wage earner in the previous example had accumulated savings of \$5,000 in December 1975 in order to purchase a car. Suppose that this individual decided to postpone buying the car for a year and to invest his savings in a new Canada Savings Bond issue priced to yield 9.4%.

A year later, the individual cashed his Canada Savings Bonds and received his invested principal of \$5,000 plus interest income of \$472. What was his real interest income?

When the individual took his money to the automobile dealer, he discovered that car prices had, on average, risen 10.4% over the intervening year, and that he would have to pay \$5,520 for a car that he could have purchased for \$5,000 the previous year. Rather than gaining \$472 by postponing the car purchase, he had lost \$48 (\$5,520 less \$5,472).

Because of the erosion of capital caused by inflation, incomes obtained from capital investments are not comparable to incomes obtained from other sources in the same year. This effect of capital erosion is often not clearly understood, but it is of key importance. Among other things, this effect means that income from labour and income from capital are differently affected by inflation.

To illustrate this, combine the two previous examples. This is done in Table 2, showing in successive columns the individual's income in 1975, his sources of income in 1976, and the 1976 figures deflated to convert them to dollars of 1975 purchasing power.

As the figures in Table 2 illustrate, the two value-eroding effects of inflation are interrelated. As noted before, the individual's wages rose by slightly more than the increase in prices. His gross interest income from savings was likewise reduced but still positive when restated in terms of 1975 dollars. However, the more important effect of inflation on his real income from savings was the loss resulting from capital erosion, which



caused his net income from capital to be negative. After taking account of this loss, the individual ends up with less total real income in 1976 than in 1975.

**Table 2**  
**Example Illustrating Impact of Inflation on Effect of Postponing Consumption Spending**

	1975 Income	1976 Income in Current Dollars	1976 Income Deflated to 1975 Dollars*
Income from capital			
Interest income	\$ -	\$ 472	\$ 439
Less loss on postponement of car purchase	-	520	484
Net income from capital	-	(48)	(45)
Income from labour			
Wages	13,000	14,000	13,023
	<u>\$13,000</u>	<u>\$13,952</u>	<u>\$12,978</u>

\*The Consumer Price Index was used to deflate 1976 dollars.

The above example illustrates the different effects of inflation on income from capital and on labour income. It also illustrates how inflation not only reduces real income, but can actually make the return from savings negative. In so doing, inflation can have a powerful disincentive effect on the volume and allocation of savings.

The fact that different types of income are affected in different ways by inflation is crucial to understanding the impact of inflation. Unfortunately, this fact is often not recognized in public discussion.

To measure income in a way which accurately reflects an individual's real spending power, it is necessary both to restate incomes in terms of dollars of constant purchasing power and to include in income the real capital losses resulting from the capital-eroding effect of inflation.

How to measure income properly in an inflationary environment is a key problem. The goal of inflation accounting must be to ensure that differences in measured income reflect the real differences in spending power of business and individuals. This goal is not met by conventional accounting procedures. Indeed, the income figures currently reported may be significantly misleading.

## Impact on Decision Makers

Measuring the effects of inflation is a necessary element of understanding such effects. Inflation affects investment decisions and business planning in many ways, such as:

- Inflation causes error. Examples of this can be found in collective bargaining and in contracts for future delivery which may be

based on incorrect forecasts of earnings and prices. Forecasting errors tend to increase when the rate of inflation rises. As well, investment decisions may contain errors due to incorrect forecasts of the real rate of return after correction for inflation.

- Inflation causes uncertainty. Business income is inherently more unpredictable under inflation due to the variability of prices and profit margins which do not match the rate of inflation. There is also less certainty about the short term and long term with respect to the potential outcome of investment decisions.
- Inflation causes business slowdowns. This condition occurs following a slowing down of the initial acceleration of prices. The inflation-induced increase in risk causes investment to be directed toward 'safer' assets such as real estate, rare art, etc., and away from business capital formation. There is less intrinsic risk, at least in the short term, by investing in these 'safer' assets. The increase in demand for these 'safer' assets primarily acts to bid up the prices of existing quantities of these assets, so that the net effect is a reduction in total private capital formation, leading to a reduction in aggregate demand. The general business uncertainty also causes business to hold back on production expansion and to cut-back existing operations, where possible, in order to reduce exposure to risk.
- Inflation reduces future real per capita incomes. The result of the effect of inflation on business investment is to cause an overall reduction in total aggregate income. This happens because business capital formation is decreased relative to the level which would occur without inflation. This phenomenon is not as well recognized as the distortion caused by inflation to the shares of the existing aggregate income received by the various groups in society. It is, however, equally significant.
- The negative impact of inflation on the level of economic activity is compounded by the impact of inflation on taxes. Business income (and other income from capital) is not measured correctly by conventional accounting techniques under inflation. Income taxes, being based on these conventional measures, are changed relative to real income (that is, to inflation-adjusted income). The effect of inflation on business and investment income (as conventionally measured) results in an overstatement of income. Taxes accordingly are increased not only in absolute dollars, but also as a percentage of real before-tax income. The impact of this unanticipated, inflation-induced increase in effective tax rates is to further depress capital investment and business expansion above and beyond what occurs without the tax change.

## **Inflation and the Individual**

Inflation has a differential impact on individuals in their roles as consumers and as savers. It can affect seriously the economic wellbeing of a retired person on a fixed income. It can, on the other hand, be beneficial to a young person who has recently purchased a house and makes

debt payments in depreciated dollars while the value of the capital asset, the house, maintains its value in terms of constant dollars.

In the case of the impact of unanticipated inflation on income from fixed income retirement assets, the individual feels the effect of decreases in the purchasing power of the dollar and in the erosion of capital. Income which is fixed by contract, for example from a mortgage or bond, is worth less than expected. To measure this income correctly, all amounts stated in current dollars should be 'deflated' by the application of a general price index to convert income measured in current dollars to income measured in dollars of constant purchasing power.

An illustration of this condition would be an individual who exchanged registered retirement savings plan assets for a life annuity of \$1,000 per month in 1971. By 1976, his yearly income had dropped from \$12,000 to \$7,552,<sup>14</sup> measured in dollars of 1971 purchasing power.

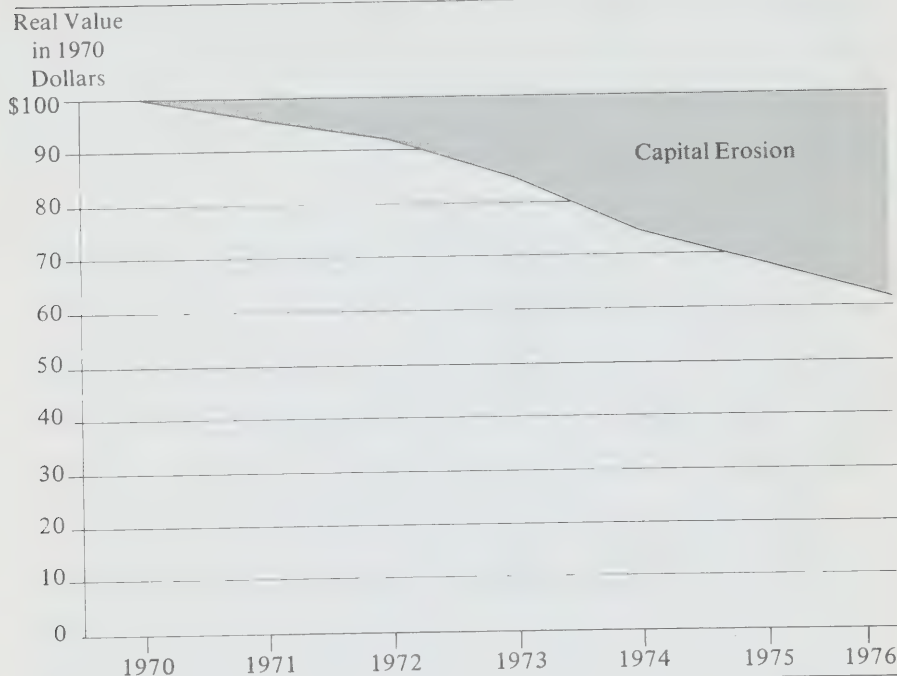
An additional effect of inflation on current real income derived from a fixed income investment is that not only is there a reduction in current income in terms of dollars of constant purchasing power, but also in the real value of the capital assets owned by the investor.

For example, consider an individual who in 1971 had invested his retirement savings in bonds with a market value of \$180,000 yielding an after-tax income of \$9,000 a year. By 1976, the individual would have had to obtain additional capital, or additional after-tax income, amounting to \$106,020 (in 1976 dollars), just to maintain the real value of his savings.<sup>15</sup>

The accompanying Figure 10 illustrates the effects of cumulative capital erosion during the period 1970 to 1976. At the end of this six-year period, 39% of the real value of the initial capital had been eroded by inflation.

This capital erosion is, of course, not ignored by investors. Inflation affects expectations regarding future income and will hence cause market prices of investment assets to change. This effect is in addition to the effect of inflation on the perceived riskiness of forecasting future incomes, which may also cause changes to the market values of investment assets. These changes in market values of assets will result in capital gains or losses for investors. The result of this situation is that the total income of an investor (including both cash income such as interest, rentals or dividends and accrued unrealized capital gains) may rise or fall. The measurement of this income in real terms (that is, in terms that are comparable from year to year) is necessary to reflect the potential erosion of capital values that may or may not have been anticipated by investors and to reflect the changed purchasing power of the dollars in which the income is measured.

It is necessary, under inflation, to provide an amount that compensates for capital erosion. This amount (commonly called a 'provision for capital maintenance') would, for the individual investor, be calculated as the product of the rate of general price inflation during the period and the beginning value of the asset. This procedure enables the value of the assets to be maintained in real terms. To convert income measured in current dollars to an amount comparable to income accrued in a previous year, it is necessary to deflate current year figures

**Figure 10 (Repeat of Figure 1)****Inflation and Savings,  
Erosion in Value of Savings 1970-1976**

Source: Statistics Canada, National Income and Expenditure Accounts  
(Catalogue No. 13-001, various issues)

Note: The percentage capital erosion since 1970 is calculated as the cumulative change in the reciprocal of the Gross National Expenditure Implicit Price Index.

by a price index that converts current dollar amounts to dollars of constant purchasing power.

The price index used in these adjustments should reflect price changes in the goods which could have been purchased had the investor not put his money into an investment asset. The relevant prices may thus be the average price of consumption goods (measured by the Consumer Price Index), the price of durable goods such as automobiles or housing, or the price of capital goods that could serve as alternative investments. As an average of these differently-specified alternatives, the Gross National Expenditure Implicit Price Index could be used. Examples of the necessary adjustments to investment income of individuals is given in Appendix E.

**Inflation and Business**

Many of the same problems that apply to individuals have equal applicability to business. The differences between the effects of inflation on



business and individuals arise primarily because of the greater complexity of business operations.

## Measuring Business Income

The same problem of capital erosion that affects individuals who accumulate savings also affects businesses which invest in capital assets. As a result, the measurement of business income must incorporate this capital erosion if it is to reflect what has actually happened to the real income of the business.

To measure business income in terms of figures which can be compared from year to year, a two-fold adjustment is necessary. The two adjustments are (1) to deduct a capital maintenance provision to allow for the potential capital-eroding impact of inflation and (2) to deflate current dollar amounts in order to measure incomes in dollars of constant purchasing power. In both cases, as for the individual investor, it is necessary for a business to compute income net of a provision to maintain capital at its beginning level in order to ascertain what can be distributed to shareholders (or otherwise consumed) without impairing the income-earning capacity of the business.

A major difference exists between individual investors and businesses in regard to defining income-earning capacity. In the case of an investor, income-earning capacity is defined as what can be done with an entire investment portfolio, and the standard of comparison is economy-wide. An investor has the option of trading the individual assets in his portfolio and in this way he may be able to reduce the impact of inflation. An investor is essentially concerned with the amount of products (consumer and capital goods) which can be purchased if his capital assets are sold.

In contrast, income-earning capacity for a business is specific to that business. As long as the firm stays in business, the income obtained from that business should be defined as net of what is required to maintain the firm's ability to continue its current level of operations.

These differences mean that in the case of a business the provision for capital maintenance should be defined as what is required to maintain the inventory and fixed assets used by the business at the level existing at the beginning of a period. Net income defined in current dollars should be net of this capital maintenance provision. This net income figure should then be deflated by the change in the general price level to make it comparable to incomes in previous periods.

## Basic Methodology for Adjusting Income

The detailed methodology for making the required adjustments to income and capital is described in detail in subsequent chapters of this Report. In summary, the procedures for adjusting reported net income are as follows:

- Adjust cost of goods sold to reflect current cost of replacing inventory sold during the year.
- Increase provision for depreciation to take account of the differ-



ence between current costs of fixed assets and the historical acquisition costs currently used to compute depreciation.

- Modify the effect of the above two adjustments to take account of the extent to which assets are financed by borrowings.

These adjustments result in a restated net income figure measured in current dollars.

To make such income figures comparable to figures for previous years, it is necessary to make a further adjustment that converts them into amounts expressed in dollars of constant purchasing power. To do this, it is necessary to deflate restated net income figures by dividing them by an index of general purchasing power. The Gross National Expenditure Implicit Price Index is used for this purpose.

## Alternative Approaches

In determining the nature of the adjustments that are required to make income reflect the impact of inflation on an individual investor or firm, income is being implicitly defined as what may be consumed by the investor or distributed to owners by the firm without impairing the income-earning capacity that existed at the beginning of the accounting period.

For an individual, this definition implies specifying income as what can be consumed while maintaining the individual's real wealth as it existed at the beginning of the period. Thus net income in current dollars must be defined as net of the provision for capital maintenance for investors described in the preceding section.

For a business that is expected to continue to operate on an ongoing basis, net business income is what may be distributed to shareholders without changing the operating capacity of the business. As for an individual investor, this implies that income should be measured net of a provision to maintain the operating capacity of the firm's capital assets. Under the assumption that the firm's current operations will (on the whole) be continued, this provision for capital maintenance should be defined as what is required to maintain or replace the assets specifically used by the firm and should thus take account of changes in the costs of replacing these assets.

Alternative concepts of income have been used as the basis for other proposals for reflecting the impact of inflation. These alternative concepts, together with their relationship to the income concept underlying the Committee's proposals for disclosure of the effects of inflation, are reviewed in Chapter 2. They are also discussed in a supplementary paper prepared for the Committee, and are reviewed in terms of economic concepts of income in Chapter 2 of the supplementary paper prepared for the Committee by Professor John Bossons.

The primary issues distinguishing alternative concepts of income are:

- Whether capital maintenance should be defined on the basis of what is required to maintain the assets of a particular firm, or defined on the basis of maintaining the general purchasing power of the owner's equity.
- Whether potential changes in the owner's wealth (often called

'holding gains') should be reflected in the definition of business income.

The first issue is essentially a choice between general price level adjustments (as for individual investors) and adjustments that reflect changes in the specific costs that are relevant to a firm's operations. Most analysts have now concluded that specific costs should be reflected in business income.

With respect to the second issue, the measurement concept underlying the adjustments proposed by the Committee excluded holding gains, primarily on the grounds that such gains are not distributable without impairing the firm's operating capacity. (Such gains would of course be included in income if realized on discontinuance of operations by the firm.)

In most cases, such gains are illusory in that they cannot be realized without abandoning the firm's ability to maintain its existing operations. Moreover, whether the unrealized gains could in fact be realized is difficult to predict. Because of the resultant subjectivity of any assessment of 'holding gains' it was concluded that a definition of income which included as yet unrealized gains would be difficult to implement. Indeed, because of their subjectivity it is debatable that such gains are properly recognizable as income even in the sense of representing real increases in asset values which can serve as collateral for loans through which owners could increase their consumption. To be consumable without being realized, a gain must be recognizable as security for a loan.

Beyond this, there is a basic question as to whether income should be defined as what can be distributed while maintaining the operating capacity of a firm, or be defined as the change in value of an owner's investment. The former is the closer to what is conventionally measured as business net income, and hence has the advantage of involving a smaller departure from generally-understood traditional concepts of income.

The ongoing controversy over how income should be defined has meant that there is no general agreement as to how inflation should be reflected in financial statements. For this reason, the Committee's proposals for disclosure of the effects of inflation on businesses do not include an adjustment to net income as reported in the financial statements, but instead focus on showing the impact of inflation on funds from operations which are available for distribution to shareholders or for use in expansion of the business. This focus avoids the necessity of attempting to resolve the underlying controversy over income concepts which has made it difficult for the accounting profession to agree on how to adjust net income for inflation.

In evaluating the impact of inflation on business, the proposed adjustments to capital maintenance provisions can be used to show how business profits are overstated in inflationary periods. Because net income is more widely known as a measure of business performance than funds from operations, the effect of using capital maintenance provisions to adjust measurements of business performance will be stated in terms of net income in the remainder of this chapter.

## The Impact of Inflation on Business Income

During inflation, net income is overstated when calculated using conventional accounting techniques. Given this, the question is whether or not the level of overstatement is sufficient to affect materially business results. As previously indicated, the quantitative magnitude of the correction necessary to arrive at real income from capital for individuals can be substantial.

The impact of inflation on business income has in fact been substantial. The reason for this is that conventional financial statements severely understate the amounts necessary to maintain the existing capital of business, and that this understatement is large relative to net incomes as reported by conventional techniques.

### Impact on Large Companies

The impact of inflation on the measurement of business profits can be analyzed in depth for large publicly-traded companies which publish detailed financial statements. Table 3 shows that between 1971 and 1975 the reported profits of 279 large non-financial companies more than doubled. In real terms, however, their profits in 1975 were 29% less than in 1971. In addition, as illustrated in Figure 11, the magnitude of the overstatement of net income, even in current dollar terms, has been increasing.

**Table 3**  
**Effect of Correcting Net Income for Impact of Inflation**  
**(279 Large Non-financial Canadian Companies)**

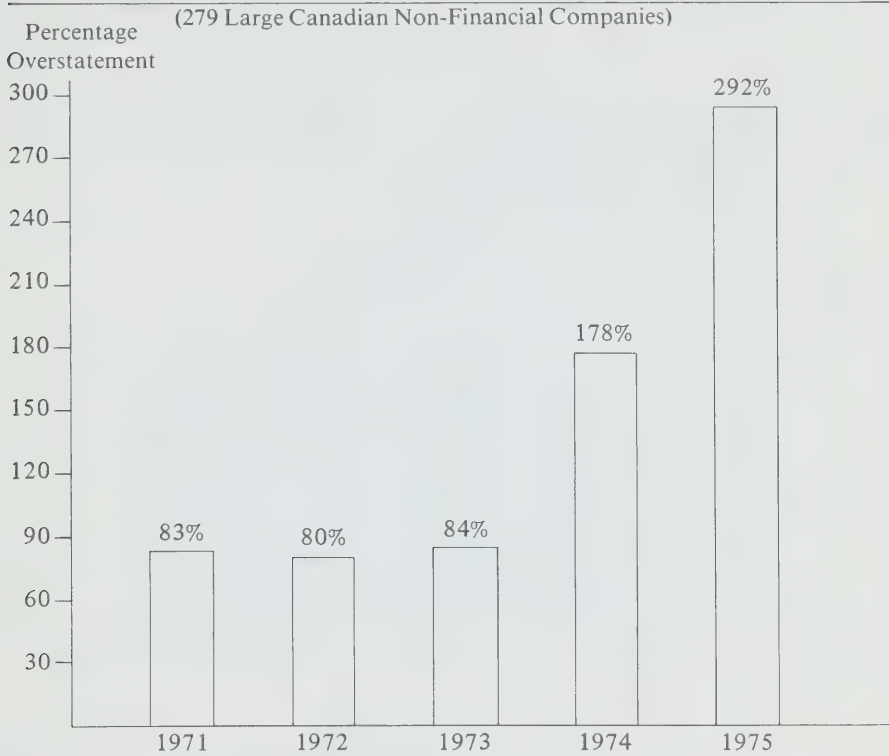
	<u>1975</u>	<u>1971</u>	<u>1971-75</u> <u>Change</u>
	(\$ billions)	(\$ billions)	
Income stated in current dollars			
As reported in financial statements	\$4.5	\$2.1	114%
Provisions for capital maintenance (net of offsets for debt financing) not made in financial statements	<u>3.3</u>	<u>1.0</u>	230%
Restated net income	<u>\$1.2</u>	<u>\$1.1</u>	9%
Income stated in constant 1971 dollars			
Restated net income	<u>\$0.8</u>	<u>\$1.1</u>	(29%)

Source: Bossons, *Impact of Inflation*, Table 4.

It is worth noting that even during the less inflationary period that existed prior to 1973, the measurement of business income was distorted by inflation. The 1971 results show an 83% relative overstatement of current dollar net income for the companies reviewed. This result occurs primarily because of the cumulative effect of inflation on the rate of replacement costs to reported costs of fixed assets. This result suggests that inflation accounting is important even during periods when inflation is at the 3% to 4% level. The double-digit inflation

**Figure 11**

**Relative Overstatement of Net Income**  
**Percentage Overstatement of Unadjusted to Adjusted Net**  
**Income 1971-1975**



Source: Bossons, *Impact of Inflation*, Table 4.

levels in 1974 and 1975 caused the difference between adjusted and reported income to increase markedly and caused a significant increase in the importance of the measurement errors resulting from inflation.

These results indicate clearly that income measured by conventional accounting techniques under any level of inflation is not a valid measure of real income.

The substantial misstatement of business income by conventional accounting procedures has important effects. Even though most individuals realize that inflation affects them, decision makers may be misled by the absence of accurate quantitative measurement of increases on an inflation-corrected basis.

The information reported in financial statements has little impact on the day-to-day management of business operations. Pricing decisions, operating plans and production choices are made on the basis of detailed facts and knowledge about the market conditions on short-run production costs for specific products. These operating decisions are little affected by the measurement of the firm's total income.

However, longer-term financial planning is potentially affected sig-



nificantly by inflation-induced errors in financial statements. Reported income and cash flows are used as the basis for making dividend decisions and long-term investment plans. In addition, reported income and cash flows are used by lenders to evaluate the viability of business financial plans. While analysts potentially can and do make estimates of the magnitude of inflation-induced distortions in measured income, rough estimates are an inadequate substitute for accurate information. As such, they lead to errors and increase investor uncertainty.

The worsening impact of inflation on business incomes shown in Figure 11 is partially the result of the increasing magnitude of the adjustments required to correct reported income and partially the result of fluctuations in reported income.

## Aggregate Impact

Changes in total corporation profits for all corporations in the economy are measured by Statistics Canada. The aggregate figures reported by Statistics Canada are obtained by adding together figures shown in corporations' annual financial statements and are stated in current dollars. As a result, they are subject to the same two types of error described above for individual companies.

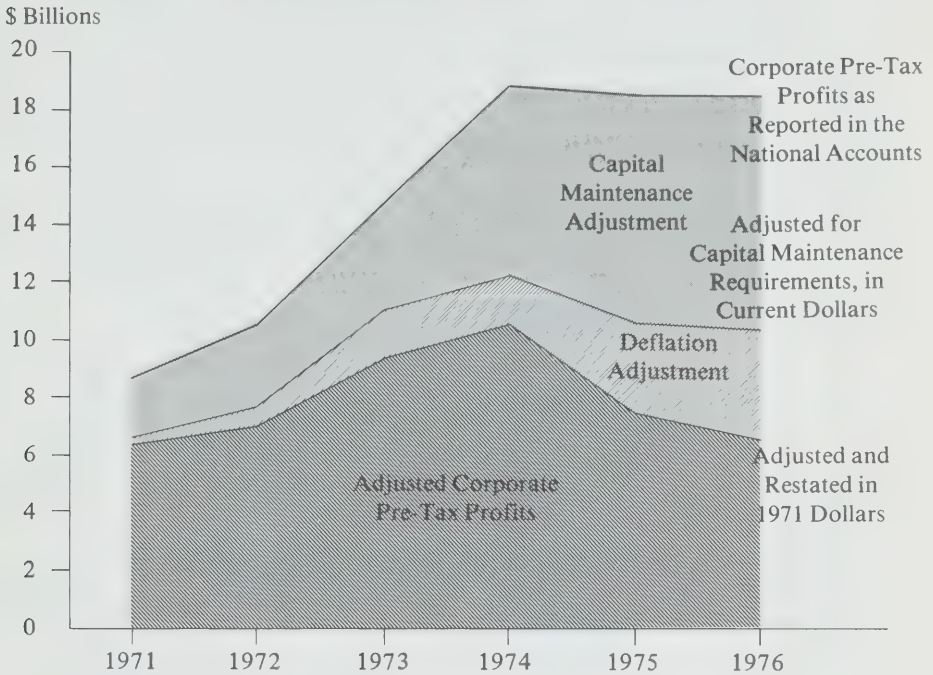
The magnitude of these errors is indicated by the estimates presented in Figure 12. This chart shows total corporation profits before taxes in the past six years, as reported in the National Accounts. It also provides an estimate of real corporate profits before taxes, stated in 1971 dollars. The difference between the two is accounted for by the two types of errors described earlier:

- *Type 1 error.* This error results from the understatement of capital maintenance provisions resulting from the use of unadjusted historical costs in conventional financial accounting. This source of error caused total pre-tax corporate profits stated in current dollars to be overstated by \$2.3 billion in 1971 and by \$8 billion in 1976.
- *Type 2 error.* This error results from reporting profits in current dollars rather than dollars of constant purchasing power. In order to see what has happened to real corporate profits, it is necessary to restate them in constant dollars. Doing so in 1976 requires a further \$4 billion adjustment in aggregate profits.

Because of these two errors, a comparison of aggregate corporate profits figures for different years can be very misleading. A cursory inspection of the profit figures reported in the National Accounts might lead one to believe that corporate profits more than doubled between 1971 and 1976. In fact, real corporate pre-tax profits in 1976 were virtually the same as in 1971.

Other forms of business and investment income which are reported in the National Accounts are also mismeasured. Unincorporated business income and rental income from real property should be adjusted to allow for inadequate capital maintenance provisions in current financial accounting. In addition, investment income should be



**Figure 12****Inflation and Pre-Tax Profits****Measurement Errors in Reported Pre-Tax Corporate Profits 1971-1976**

Source: Bossons, *Impact of Inflation*, Table 21.

Note: Government corporations are excluded from the figures shown in this chart.

adjusted to reflect any monetary adjustments made in determining business income.

## Variation Among Large Companies

If all companies were uniformly affected by inflation, the measurement errors in conventionally reported net income would be relatively easy to estimate. Unfortunately, income of different companies is not uniformly distorted.

The variations among companies in the relative importance of inflation-induced distortions in conventionally reported net income result partly from inter-industry differences and partly from variations among companies in the same industry.

Inter-industry differences are summarized in Figure 13, which illustrates the average effect of adjusting business income for inflation among large companies in a number of major industry groupings in the years 1971 and 1975. This shows that the distortions introduced by using an invalid measure of income are not uniformly distributed

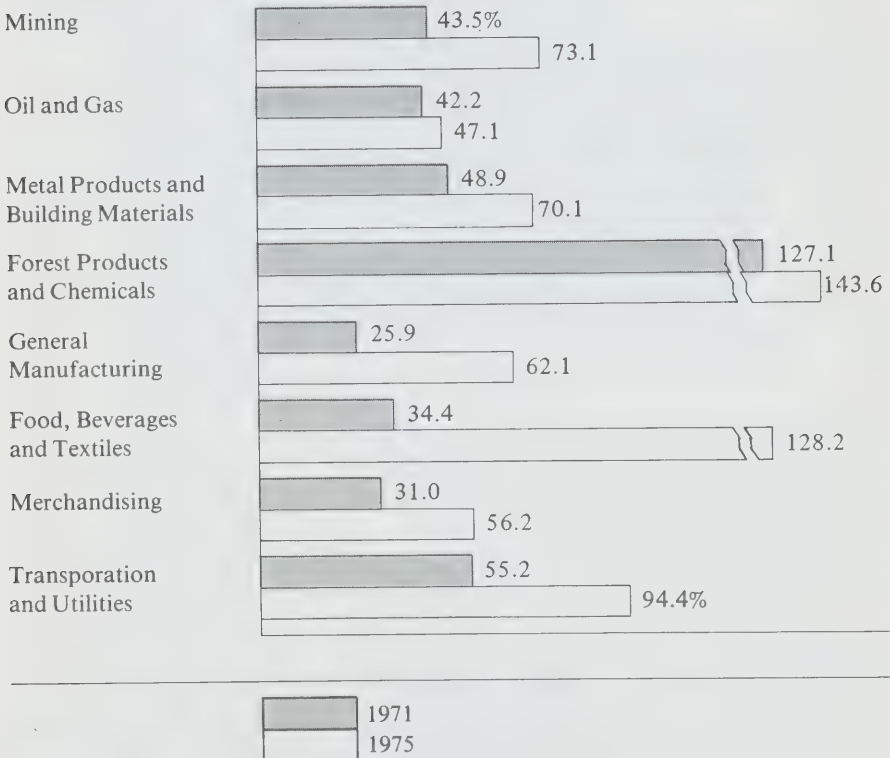
across industries. Different industries are affected by inflation to differing degrees, depending on:

- The capital intensity of the industry and its asset replacement cycle.
- The level of inventories required for operations.
- The financial structure, reflecting the extent to which the burden of maintaining a capital base is shifted to creditors.

In addition, industries differ in the extent to which profits in any single year differ from normally-expected levels.

**Figure 13**

**Percentage Decrease in Net Income Resulting from Adjustments for Inflation, by Industry Sectors 1971 and 1975**



Source: Bossons, *Impact of Inflation*, Table 30.

The average impacts on net income shown in Figure 13 were estimated using the sample of 279 large companies referred to earlier. As might be expected from the overall results for this sample reported in Table 3, inflation-induced errors in measured net income existed in all industries in 1971 though not to the same extent as in 1975. However, the degree of error varies substantially among industries in both years.

The factors underlying these differences are worth noting. In two industry groups (forest products and chemicals, food, beverages and

textiles), companies would have reported an aggregate net loss in 1975 had their results been reported on an inflation-adjusted basis. In all other industries except oil and gas (where large increases in net income resulting from product price increases roughly offset the increased impact of inflation), more than 50% of 1975 net income was illusory.

At a company level, there was substantially more variation than indicated by Figure 13. This inter-company variation is summarized in Table 4. In order to eliminate the effect of year-to-year variation in net incomes at a company level, the data presented in Table 4 show changes in total net income over the five years 1971 to 1975 resulting from correcting reported income for inflation.

As in Figure 13, the changes shown are restricted to the effects of adjusting current-dollar net income for inadequate capital maintenance provisions, and do not include the effects of converting incomes to constant-dollar figures.

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**Table 4**

**Variation Among Companies in Percentage Reduction in Total 1971 to 1975 Reported Net Income Resulting from Adjustments for Inflation**

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Mining	2% – 158%
Oil and gas	4 – 166
Metal products and building materials	22 – 177
Forest products	42 – 121
Chemicals	43 – 729
General manufacturing	9 – 413
Food, beverages and textiles	26 – 727
Merchandising	7 – 134
Transportation and utilities	5 – 894

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Source: Bossons, *Impact of Inflation*, Table 31.

Note: The above tabulation excludes 14 of the 279 large Canadian non-financial companies analyzed for which total 1971 to 1975 net income was negative before adjustments for inflation.

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## Impact of Inflation on Small Business

Small business is severely hurt by inflation. The small business particularly feels the effect of inflation because of more limited access to capital than larger companies. This means that it is harder for the small business to finance inventory price increases and to replace capital eroded by inflation.

Within the spectrum of small business, reported income would be affected to a different extent by the effects of capital intensity and inventories of the particular business. This means that some small businesses would show little change in reported income as a result of inflation adjustment; others would show changes corresponding to or larger than those of larger businesses.

## Impact of Inflation on Taxes

Corporation and personal income taxes on business and investment income are levied on the basis of conventional historical accounting measurements. Because of the overstatement of current-dollar income during inflation by conventional accounting, real tax revenues collected by governments from business and from investors are increased relative to real pre-tax income. This increase in effective tax rates creates a revenue windfall for governments.

Because of these inflation-induced increases in effective tax rates on business and investment income, the tax increases that occur in an inflationary period represent an increase in the share of aggregate output allocated to governments. As such, they provide a means by which inflation can result in an increase in the relative importance of government in the economy.

### Taxes on Business Income

The overstatement in reported net income by conventional accounting standards has been described earlier. With taxable income based on conventionally reported income, taxes are increased to the extent that inflation-induced distortions cause reported incomes to exceed inflation-adjusted income.

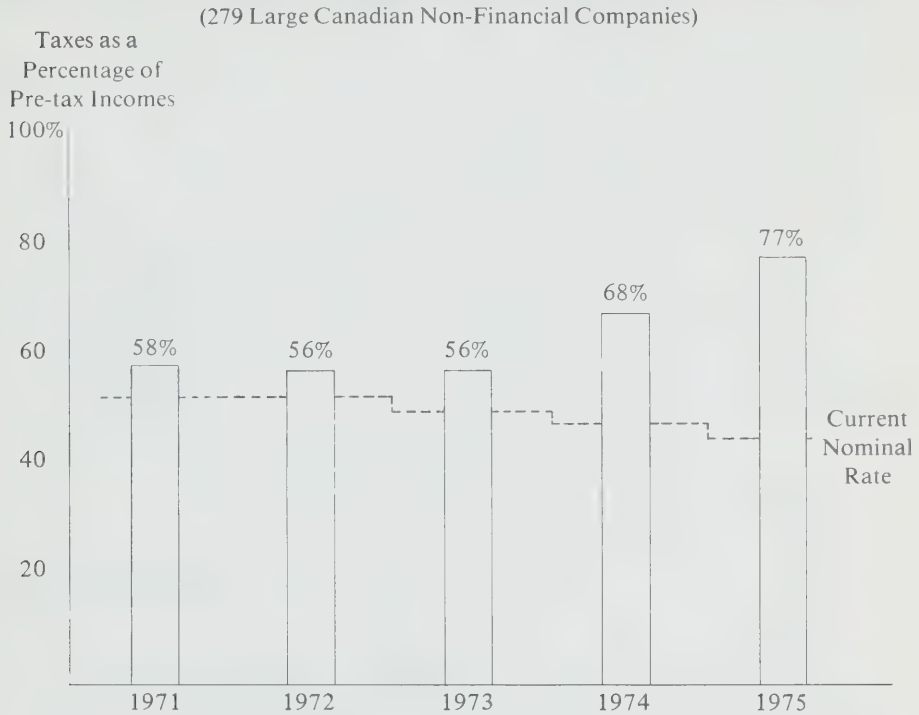
Figure 14 illustrates how this occurred between 1971 and 1975 for the sample of large non-financial corporations analyzed earlier. This chart shows that average effective tax rates rose from 58% in 1971 to 77% in 1975 for the 279 companies in the sample. During this time, the nominal current tax rate (the rate applied to reported taxable income pursuant to tax legislation) dropped from approximately 51% to approximately 45%.<sup>16</sup> The tax reductions legislated in 1971 and 1973 were thus more than reversed by the impact of inflation.

The effect of taxes (both federal and provincial) on real corporate profits is shown in Figure 15. Although, as noted previously, aggregate pre-tax corporate profits were only slightly higher in real terms in 1976 than in 1971, real government tax revenues from corporations increased by more than one-third. As a result, after-tax corporate profits in 1976 were 23% lower (in dollars of constant purchasing power) than in 1971.

The total inflation-caused windfall gain in tax revenues from corporations is estimated to have been approximately \$2.7 billion in 1975 (measured in current dollars), and was not materially different in 1976. This tax revenue windfall, shared by federal and provincial governments, obviously permitted an increase in real government spending to occur which otherwise would have had either to be curtailed or to be financed from other tax sources. Nevertheless, the windfall was not costless. The increase in taxes helped dampen business capital formation, and has contributed to the increase in unemployment now being experienced.

The preceding review is not intended to serve as a suggestion that business taxes should in fact be reduced; that is an entirely separate policy issue. What is important here is that business income be calcu-



**Figure 14 (Repeat of Figure 5)****Inflation and Tax Rates****Effective Tax Rates on Adjusted Pre-Tax Incomes 1971-1975**

Source: Bossons, *Impact of Inflation*, Table 38.

Note: Effective tax rates are ratios of total taxes (including deferred taxes) to pre-tax income adjusted to reflect the net impact of inflation.

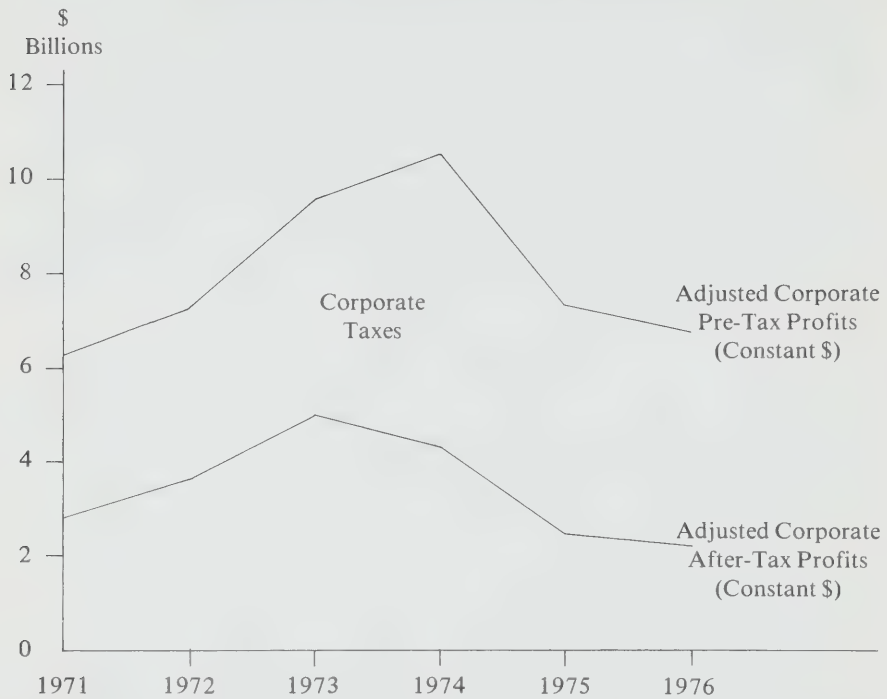
lated on an accurate basis and that appropriate tax rates be structured to obtain the required government revenues. What seems clearly inappropriate is that large tax increases should occur by accident, without explicit prior legislative approval. In some cases, such inflation-induced tax increases (unanticipated by legislators before the occurrence of the inflation) dilute and potentially reverse planned tax incentives. Whether such tax incentives are desirable is also a separate policy issue but whether the effectiveness of planned incentives is reduced is a relevant question to this study.

The effect of inflation on effective tax rates has a particularly negative impact on the small businessman. The inflation-induced tax increase represents a direct withdrawal of working capital, which can inhibit business growth and innovation, and may even threaten the life of a small business. It is not unusual to find a small business using its cash flow to finance inventory and accounts receivable. The increased tax bill coming at the end of the year means that it then has to borrow money to finance inflation-induced income tax increases.



**Figure 15****Corporate Profits Adjusted for Inflation 1971-1976**

(All Canadian Companies)



Source: Statistics Canada, National Income and Expenditure Accounts (Catalogue No. 13-001), Bossons, Impact of Inflation, Table 36.

Note: All figures are stated in dollars of constant (1971) purchasing power.

## Variations in Effective Tax Rates

The differences in the relative size of capital maintenance provisions required to reflect the impact of inflation cause wide variations in real effective tax rates.

The extent of the inter-company variation is shown in Table 5, which reports the result of an analysis of the sample of 279 large public companies used earlier. More than one-quarter of the firms in the sample had effective tax rates exceeding 100% in 1975. At the same time, 15% of the sample had effective tax rates that were less than 50%. The nominal tax rate averaged 43.5% in 1975.

This wide dispersion in effective tax rates results in an accentuation of inter-firm differences in the impact of inflation on net incomes. If it is difficult to rationalize the accidental year-to-year changes in average effective tax rates resulting from inflation, it is all the harder to rationalize such wide inter-firm differences in the effective severity of taxation.

**Table 5****Distribution of Companies by Effective Tax Rates on 1975 Pre-tax Income, Adjusted for Impact of Inflation**

	Percentage of Companies with Effective Tax Rates			
	Less than 50%	50% to 75%	75% to 100%	Greater than 100%
Mining	26%	26%	11%	37%
Oil and gas	27	47	20	7
Metal products and building materials	—	60	27	13
Forest products and chemicals	15	15	31	38
General manufacturing	20	40	16	24
Food, beverages and textiles	14	24	21	41
Merchandising	7	63	10	20
Transportation and utilities	16	33	20	31
ALL INDUSTRIES	15	40	19	26

Source: Bossons, *Impact of Inflation*, Table 40.

## Taxes on Individual Investors

The same type of increase in effective tax rates occurs for individual investors. Because taxable income is not defined to exclude the capital maintenance provisions required to keep the real value of capital assets unchanged, inflation caused an increase in effective tax rates on many forms of investment income.

Because the Income Tax Act provides for the taxation of capital gains at preferential rates and also provides for the exclusion from taxable income of certain forms of income (e.g., interest and dividend income totalling less than \$1,000 or capital gains on owner-occupied homes), effective tax rates are not uniformly increased by inflation for all forms of investment income accrued by individuals. This results in inflation-induced changes in the tax incentives to hold different forms of assets.

For those assets which are fully subject to tax, the effect of the present definition of taxable income is to cause investment income to be subject to additional tax in an amount that is equal to the product of the applicable capital gains tax rate and the provision that should be made for capital maintenance. In effect, this additional tax is a tax on wealth, levied at a rate of tax which is proportionate to the rate of inflation.

It should be noted that, because of this wealth tax component, inflation-induced tax increases on income from capital are different in kind from other inflation-induced tax increases. With the indexation of rates in personal income tax, inflation-induced increases in personal income tax revenues are roughly proportionate to price increases, and so are not material in real terms. Likewise, inflation-induced increases

in sales tax revenues vanish when deflated by price increases. By contrast, the wealth tax component of inflation-induced increases by taxes on business and investment income is a real tax increase that does not vanish when deflated.

## The Outlook

It would be exceedingly optimistic to predict that the current Canadian inflation will soon end. Even at best, it is unlikely that the rate of inflation in 1978 will be brought down to the moderate rate of inflation that existed in 1971 and 1972, let alone to the low inflation rates that existed prior to 1965.

Current macroeconomic forecasts generally concur in predicting continued high inflation rates in 1978, even though the rate of unemployment is at the same time expected to be at record levels through the end of 1978. If governments react to the high unemployment rate by relaxing monetary policy or by providing more fiscal stimulus, it will be difficult to avoid a recurrence of the inflationary acceleration that occurred in 1973 and 1974.

Unfortunately, a prolonged inflation becomes widely embedded in expectations, and consequently becomes harder to eradicate the longer it is prolonged. While it is to be hoped that current efforts to reduce the rate of inflation to pre-1965 levels will succeed, it is only prudent to undertake steps that will reduce some of the costs of inflation.

The effects of inflation are generally acknowledged. In some areas, for example the stock market, market price adjustments have occurred in response to these effects. But generally its effects are known more in a qualitative rather than quantitative sense. This means that decision makers must work with imperfect information which may result in under-correction or over-correction of results and consequently inappropriate decisions.

# Inflation Accounting

The previous chapter has described the general impact of inflation on business income and on other income from capital, and has shown how conventionally reported income is overstated during an inflation. A number of proposals have been advanced by the accounting profession in different countries to deal with the problem. These proposals are described in this chapter.

## The Role of Accounting

Present accounting theory was largely developed in the eighteenth and nineteenth centuries with the advent of the limited liability company. The introduction of such companies enabled individuals to invest in a business venture without participating directly in the management of the enterprise. As the investor was not directly involved in the venture and lending institutions no longer dealt directly with the owner, it became necessary to develop an objective accounting and reporting system so that the investors and creditors could be informed of the financial position and results of operations of the enterprise.

Originally, the main focus of financial statements was the statement of financial position—or balance sheet. The balance sheet reflected the net worth of a business. The difference between the net worth at the beginning of the period and the net worth at the end of a period represented the profit for the year. No provision was made in the accounts for the reduction in the value of productive assets consumed in the production process. This lack of provision often resulted in serious liquidity problems when the operating assets expired and new capital had to be obtained to continue the venture. As a result, financial statements gradually evolved to show the effect of capital consumption on net profits available for distribution to owners.

## Current Role of Accounting

Financial statements communicate information about a business to the shareholders, creditors and others who have an interest in the operation

of the enterprise but do not have access to the internal information systems.

Many original accounting concepts are still relevant today, although significant refinements and improvements have been introduced to provide a uniform framework of accounting and reporting by which the operations of business can be assessed.

Financial statements are still prepared primarily for investors and creditors of the company. The needs of these users are not identical, but they are sufficiently similar for standard accounting and reporting practices to apply. The annual financial statements are, however, general purpose statements and include only summarized information about the business operations. Additional information is often given in the annual report presented to shareholders, but there are no standards governing the type or extent of information which may be disclosed. Financial statements, therefore, continue to be the main vehicle for transmitting economic data about the operations of an enterprise.

Information from financial statements is also used extensively in the collection of aggregate economic data. Statistics Canada publishes annual and quarterly summaries of corporate financial statements,<sup>17</sup> and corporate profits are an integral part of the National Accounts.<sup>18</sup>

## Current Developments

The present role of corporate accounting has been increasingly questioned by governments, businessmen, economists and accountants. The economic environment facing business has changed dramatically over the last ten years and, increasingly, groups in society are taking a specific interest in the operations of businesses. This has increased the requirement for the disclosure of all types of information.

Current accounting and reporting practices do not meet all of the specific requirements of tax authorities, employees, customers, sophisticated investors, economic policy makers, regulatory agencies and the general public. These interest groups are often profoundly affected by business activities. Business and the accounting profession are now under increasing pressure to revise present accounting and reporting practices to satisfy demands for increased disclosure.

In response to this pressure, the accounting profession in several countries, including Canada, have set up study groups to review the whole subject of corporate accountability. In Canada, the Accounting Research Committee of The Canadian Institute of Chartered Accountants [CICA] has recently appointed a study group on corporate reporting to determine workable objectives of external financial reporting. The committee is expected to report before the end of 1977.

In the United Kingdom, the Accounting Standards Steering Committee published a discussion paper, *The Corporate Report* in 1975.<sup>19</sup> This report examined the public accountability of business enterprises and recommended that substantial additional information be published as part of the annual report of enterprises. Items to be included in these additional disclosure statements include the value added to goods and services manufactured by the enterprise, details of employment, money exchanges with government, transactions in foreign currency, future



prospects and corporate objectives. *The Corporate Report* concluded that no one system of measurement is capable of meeting all user needs and that additional research would be required to develop a suitable comprehensive information reporting system. A similar review was undertaken in the United States, the *Report of the Study Group on the Objectives of Financial Statements*,<sup>20</sup> published in October of 1973 by the American Institute of Certified Public Accountants.

These reviews reflect a gradual change of accounting disclosure in the direction of providing a greater number of measures of performance that reflect the diverse objectives of different interest groups seeking information. As a result, there is a gradual evolution toward putting less emphasis on a single number such as net income in measuring business performance.

In summary, present accounting and reporting practices are undergoing critical review in which the consideration of inflation accounting represents only one of the many alternative suggestions for improving the publication and communication of expanded and improved information about the activities of business.

## Inflation Accounting

Despite the deficiencies of current accounting practices during periods of inflation, they have several advantages, including consistency, objectivity and comprehensibility. Perhaps the greatest advantage of current practices is that they are widely understood. However, their deficiencies are not as widely realized.

Measurement of assets by reference to historic costs is objective in the sense that the historic cost of an asset is usually a precise, unambiguous figure capable of independent verification. However, businessmen and accountants have for many years been aware that recording items in historical costs can lead to financial disclosure which is precise but possibly misleading.

During the 1960s, proposals were made for the development of an accounting system which would reflect the current value of the assets of an enterprise.<sup>21</sup> Accountants, at that time, were generally dubious and unenthusiastic about such a change. With the general rate of inflation being relatively low, it was held that no great urgency existed for a dramatic change in accounting theory.

Interest in current value accounting was rekindled with the worldwide onset of high rates of inflation in the early 1970s. Current value accounting was looked to as a method of describing the impact of inflation on business enterprises.

## General Price Level Adjustments versus Replacement Cost

The initial reaction by the accounting profession was to develop a system of inflation accounting to deal with changes in purchasing power. This method is known as general price level accounting [GPL]. General price level accounting was introduced in the United Kingdom in early 1973. Shortly after there were similar proposals in the United States,

Australia and Canada. Under this system, the financial statements of the company are restated in terms of the current purchasing power of the currency. This is achieved by use of a single general price level index which is easy to apply and retains the quality of conventional financial statements—that of objectivity.

General price level accounting implies a definition of capital maintenance which is appropriate for the individual investor. This reflects the fact that, in calculating net investment income in real terms, the appropriate measurement standard for an individual is what can be purchased with funds obtained from assets. General price level accounting allows for changes in this purchasing-power standard.

After some experimentation with general price level accounting, it became apparent that this method did not describe the impact of inflation on individual firms. In part, these perceived deficiencies reflected an increasingly widespread belief that the income concept underlying the general price level accounting proposals did not provide the information normally desired by users of financial statements.

Concerned about the implications of general price level accounting, the British Government, in 1974, set up the 'Inflation Accounting Committee' under the chairmanship of F.E.P. Sandilands,<sup>22</sup> to examine alternative accounting methods which would allow for specific price changes. The Sandilands Report was published in September 1975, and recommended the adoption of a current cost accounting system. Under this system, assets would be shown at their value to the business, normally their current replacement cost or economic value. Provisions would be made in arriving at income from operations to provide for the replacement cost of assets consumed in operations, that is, inventories and fixed assets.

At the same time that the Sandilands Committee's work was under way, the accounting professions in other countries, including Canada, began to reassess their approach to inflation accounting. Following the publication of the Sandilands Report, an implementation committee of The Canadian Institute of Chartered Accountants was set up to examine the practical implications of a current value method. Concurrently, the Securities and Exchange Commission<sup>23</sup> in the United States set out disclosure requirements for replacement cost data, and studies were undertaken in Australia<sup>24</sup> and New Zealand.<sup>25</sup>

The reason for the shift from general price level accounting to current cost accounting was the realization that the impact of inflation on different companies was not uniform and that it was important for the accounting system to clearly describe the differing impact between industry groups and individual companies. The general price level adjustment, based on a single overall index, did not make this distinction.

## Refinements in the Concept of Income

Inflation accounting proposals involve a reexamination of the concepts of capital and income. The most widely accepted definition of income is that provided by Sir John Hicks<sup>26</sup> who in discussing the income of individuals wrote:

"The purpose of income calculations in practical affairs is to give people an indication of the amount they can consume without impoverishing themselves. Following out this idea it would seem that we ought to define a man's income as the maximum value which he can consume during a week, and still expect to be as well off at the end of the week as he was at the beginning."

This concept is reflected in the definition of inflation-adjusted net investment income used in Chapter 1.

In applying the Hicksian definition of income to business, it is necessary to be precise as to what "consumption while remaining as well off" means in the context of a particular firm. This was interpreted by Sandilands as follows:

"A company's profit for the year is the maximum value which the company can distribute during the year, and still expect to be as well off at the end of the year as it was at the beginning."

The Sandilands concept of capital was based on maintenance of productive capacity (i.e., the preservation of the utility of the productive assets of the enterprise). Under this concept of capital, inflation-adjusted net income would represent the historical cost accounting profit, less amounts representing the additional current year's portion of the costs that would be required to replace the assets sold or consumed. The resulting income would be the amount that could be distributed to the contributors of capital without impairing the ability of the business to maintain its operating capacity.

The Sandilands concept of income is similar to that implicit in the adjustments proposed in this report, with one exception. The exception is the offsetting provision for the effect of debt financing of assets which is included in our adjustments. In effect, Sandilands made no distinction between income which could be distributed to all investors [including lenders as well as shareholders] and income distributable to shareholders. In so doing, he ignored the question of how to reflect the real transfers of purchasing power between lenders and shareholders that would be caused by inflation. By contrast, the income concept underlying the adjustments proposed in this report is what may be distributed to shareholders after taking account of the firm's use of debt financing.

The concepts of business income underlying both the Sandilands proposals and the proposals set out in this report postulate the continuing existence of the firm as an operating entity and, therefore, define capital maintenance as what is required to ensure continuation of the firm's operations. As such, they differ from the concept of income appropriate to measuring portfolio investment income. The fact that shareholders may sell their investments in a firm without affecting the firm's continuing existence implies that maintaining the operations of a firm is not relevant in measuring inflation-adjusted portfolio gains of shareholders. Shareholders, unlike firms, cannot be assumed to be constrained to maintain their investment in any particular operating entity, and, therefore are more concerned with maintaining the general purchasing power of their investments.

The continued existence of a firm (normally assumed by investors



who purchase a firm's shares) is a fact that has implications for the definition of business income. In effect, business income is defined assuming the continuation of operations, while investment income by contrast is defined to reflect the assumption that the investment can be liquidated at any time. The net business income of a firm is thus the net profit of the firm after allowing for all costs, including the potential cost of replacing fixed assets which depreciate as a result of use in operations.

As an example, consider a firm with fixed assets stated at a net book value of \$20 million, no inventories, other assets of \$5 million, and no debt. The ratio of the replacement cost of its fixed assets to reported book value is 1.5, so that reported current year depreciation charges of \$1 million must be increased by \$500,000 to reflect what would be required to replace capital used during the period. In fact, it invested \$1 million in new plant and equipment during the year, so that if the adjusted rate of depreciation correctly reflected capital consumption, the real value of the firm's year end operating capacity was less than at the beginning of the year. The firm's real net income in current dollars (in the sense of what can be distributed to shareholders without changing the firm's operating capacity) is thus \$500,000 less than as reported.

If in the above example, the firm had paid all of its reported income out as dividends, part of these dividends would have resulted in a reduction of the firm's real capital.

To the investor, income which may be distributed by the firm without impairing its operating capacity is important information. It provides a clear measure of operating performance that is critical to an evaluation of the likely future performance of the firm.

The net income actually accrued by the shareholder on his investment is quite different from that reported by the firm. The shareholder's investment income is determined by the market performance of the firm's shares. The before-tax income accrued by the shareholder is equal to his share of what the firm actually distributed as dividends to shareholders, plus capital gains on his shares. His net income from investing in the firm is this sum less (1) taxes thereon, and (2) an amount which offsets the erosion in the general purchasing power of his investment which is caused by increases in the general price level. The amount of this offset depends on the initial market value of his investment, which bears no necessary relationship to the book value of the firm. The amount required to maintain the value of the investor's initial investment would not necessarily bear any relationship to the additional capital maintenance provision required for the firm.

For example, in the case of the firm described in the previous example, assume that the rate of general price level inflation during the year was 10%. Even if by chance the market value of the firm's shares at the beginning of the year equalled their book value of \$25 million at that date, the capital maintenance provision for investors would not equal the \$500,000 required for the firm. The provision which should be deducted from after-tax income from dividends and accrued capital gains would be \$ 2,500,000 for all shareholders combined.

What is relevant to an investor in measuring his personal net income from an investment in a firm's shares is thus different from what is relevant to the same investor in evaluating the operating performance of

the firm. For the latter purpose, the appropriate income concept is one that shows the amount distributable by the firm without diminishing its operating capacity.

## Reflecting the Use of Debt Financing

Since the publication of the Sandilands Report, there has been increasing discussion about the impact of inflation on the assets and liabilities denominated in terms of money or claims to money, e.g., accounts receivable, current and long-term liabilities. Sandilands concluded that as the measurement unit was the monetary unit (as opposed to a unit of purchasing power under general price level accounting) there could be no recognition of purchasing power gains or losses attributable to assets and liabilities denominated in terms of a monetary unit.

The New Zealand Committee of Inquiry into Inflation Accounting, which reported in September of 1976, accepted the basic Sandilands capital maintenance concept, but concluded that there should be two additional adjustments made to arrive at inflation-adjusted net income. First, it concluded that monetary assets such as cash and accounts receivable had an operating capacity and that operating capacity declined as the value of the currency declined. It recommended a charge to earnings in calculating the profit of an enterprise to provide for the maintenance of the operating capacity of certain monetary assets which could be regarded as essential to the continued operations of the business. Second, the committee drew a clear distinction between the income of the enterprise and the residual income attributable to the owners. It concluded that, when considering the latter, the 'gain' arising from the non-equity financing of a portion of the increase in value of physical assets or reduction in value of the monetary assets should be taken into account. Under this concept of capital maintenance, income was defined as the amount that could be distributed without impairing the operating capacity of the owner's investment in the enterprise.

The conclusions of the New Zealand Committee had a significant influence on the proposals advanced in this Report. However, they have been applied in a different way that matches the timing of the recognition of 'financing gain' with that of the additional deductions from income required to make adequate provision for the maintenance of capital assets. Essentially, this implies reducing the additional capital maintenance provisions which result from the impact of inflation by an amount which represents the proportion of such additional capital maintenance which is financed by net monetary liabilities (Appendix D).

## Holding Gains

All of the current value systems proposed to date require the revaluation of assets (and in some cases liabilities) with corresponding increases in shareholders' equity either directly, by the creation of a revaluation or capital maintenance reserve, or by crediting all or a portion of the revaluation to income. Where such revaluations are credited to income, they are termed 'holding gains'.



As noted in Chapter 1, holding gains on fixed assets represent unrealized potential gains for shareholders that might be realized if the assets of the firm could be sold at their current values. Whether such gains can in fact be realized is questionable. However, even if such gains are realized, they may not in fact be distributed so long as the firm's operations are continued. If the firm's operations are discontinued, then of course any gains realized on the sale or liquidation of assets will be distributable and hence included in income under all income concepts.

In the case of inventories, holding gains are realized on sale, and are reported in net income. However, as with fixed assets, such gains are illusory in that the inventory must be replaced to permit operations to be continued.

Because the inclusion of holding gains is not consistent with the traditional income concept, it is questionable whether such gains should be included in 'net income'. It would be preferable to describe them by a different term.

An income concept which includes holding gains is clearly different from one which attempts to measure a firm's operating performance after maintaining productive capacity. The Committee concluded that the most critical aspect of the measurement problem created by inflation is to measure what is required to maintain business operating capacity.

## Cash Flow versus Income

At this time, there is no universally accepted method of current value accounting. Until such time as definitions of capital and income can receive more general agreement, it would seem prudent to adopt some form of interim disclosure which does not require a change to the concept of income as currently applied.

A consistent pattern in the development of income concepts has been the influence of liquidity problems caused by failure to show the effect of capital consumption. The impact of inflation which is of primary importance is its effect on amounts required to sustain a firm's operating capacity. This impact can as well be shown in terms of its effect on funds from operations available for distribution as it can be in terms of net income.

While there are many potential definitions of net income, there is only one definition of cash flow from operations. Accordingly, disclosure of the effects of inflation on distributable funds should have the advantage of clarity and of avoiding the need to decide on competing income concepts.

From a practical standpoint, inflation's most severe impact is on the adequacy of corporate cash flow and it is, therefore, extremely relevant to relate the impact of inflation to the liquid funds at the disposal of an enterprise. The proposed presentation will describe more accurately the cash generating power of an enterprise.

A proposal for the disclosure of the effect of inflation on funds available for distribution or for business expansion is presented in Chapter 5.

# Inflation and Taxation

The impact of inflation on taxes was described in Chapter 1, Understanding the Problem. It was shown that corporate and personal income taxes on business and investment income levied on the basis of conventional accounting measurement techniques result in the following:

- An unintended increase in real tax revenues to governments—a windfall gain for governments.
- An increase in the share of aggregate output allocated to governments—a transfer of real wealth from business to governments.
- A tax on wealth, caused by the present tax treatment of investment income and capital gains.
- An increase in effective tax rates on business income.
- Differing tax impacts on business sectors and firms within the sectors due to the varying impact of inflation on their income.
- A serious inhibition in the growth of small business.

## Existing Recognition

Until this year, the only recognition and relief for inflation in the Canadian tax system has been the indexation of personal exemptions and tax rate schedules applicable to individuals.

In the Federal Budget brought down in March 1977, an inventory adjustment was proposed for tax purposes which would provide relief against the effects of inflation on investments in inventories.<sup>27</sup>

## Fixed Assets—Capital Cost Allowances and Investment Tax Credits

The present tax system contains no specific provision for recognizing the effects of inflation on fixed assets. However, it contains incentive provisions for investments in fixed assets. These significantly reduce the

tax that might otherwise be payable on business income earned in a year and are as follows:

- The present system of capital cost allowances for business investment in fixed assets often permits a deduction for tax purposes that is greater than depreciation based on asset life or charged against reported income. This is particularly true for manufacturing and processing businesses, for which there are a number of incentive allowances.
- An investment tax credit of 5% is permitted in respect of investment in qualifying assets acquired by manufacturing and processing businesses. Further, the March 1977 federal budget proposed that this credit be applicable to qualifying assets acquired until 1980 and that the credit be raised to 7.5% for qualifying assets acquired in specified areas, including Northern Ontario.

For most businesses, capital cost allowances have the effect of deferring taxes until a subsequent year. Eligibility for investment tax credit results in a permanent reduction in taxes payable. These incentives were intended as stimulants to investment and growth in manufacturing and processing businesses, not to provide a tax offset for the effects of inflation. In referring to these incentives in his budget speech of February 1973, the then Minister of Finance, the Honourable John N. Turner, said:<sup>28</sup>

“The measures to reduce the tax burden of manufacturers and processors represent a first major step in the development of a coherent set of new industrial policies. They are needed to strengthen the foundation of our economy and its capacity to create jobs for our working men and women”.

## The 3% Inventory Deduction

Specific relief for the effects of inflation on business income has now been proposed by the Federal and Ontario governments in the form of a deduction equal to 3% of the opening inventory for the year. This deduction would be applicable to 1977 and subsequent years. In introducing this provision, the present Minister of Finance, the Honourable Donald S. Macdonald, noted that:<sup>29</sup>

“This measure does not represent a comprehensive response to the problems caused by the interaction of inflation and taxation on business income. However, it will provide a broad measure of relief and thereby enhance the flow of internally generated funds available for business expansion. It also has the considerable merit of being simple to use and requires no fundamental change in accounting practices”.

Two of the Minister's points merit further consideration. First, he acknowledges that this measure will not fully offset the effects of the present rate of inflation on the taxation of business income—acknowledging that a deficiency remains in the recognition of the effects of inflation on inventory investment. Second, he stated that the measure will ‘enhance the flow of internally-generated funds available for business expansion’. This result is unlikely as most businesses will require the funds resulting from the tax saving to replace inventories at higher prices.

This matter was also considered by the Treasurer of Ontario, the

Honourable W. Darcy McKeough, in his budget speech in April 1977 when he said:<sup>30</sup>

"The recent federal budget acknowledged the importance of this area of concern by introducing some changes in the method of taxing inventories. I welcome this move as a positive contribution but I think we have to go further and examine in considerable detail the adverse effects of inflation on business investment capabilities and job creation. Therefore, I am asking the Inflation Accounting Committee to look at the recent federal tax changes and to assess their impact on investors in Ontario".

To determine the relief provided by the proposed 3% inventory deduction, an estimate has been made of its effect on 1975 taxable incomes of companies in manufacturing, processing, trading and other operating businesses had it been applied in that year. This estimate was then compared with an estimate of the tax on 'inflation gains' in the inventories of those businesses. The results are as follows:

**Table 6**

**The Effects of the 3% Inventory Deduction on Taxes Payable by Corporations (All Canadian Companies)**

(\$ millions)

	Total Federal and Provincial Taxes	Ontario Taxes
Tax on 'inflation gains' in inventories	\$900	\$100
Tax relief from 3% deduction	350	40
Deficiency in tax relief	\$550	\$ 60
Percentage of relief provided by the 3% deduction	39%	

Source: Staff estimate based on 1975 taxes of 279 large Canadian non-financial companies, projected using Statistics Canada data. (Repeat of Table 1)

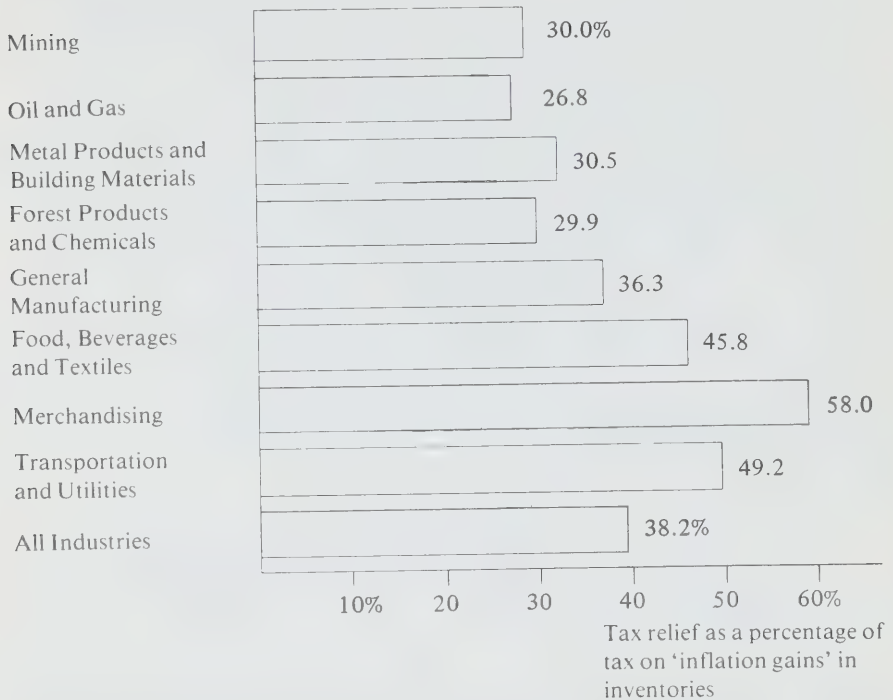
The overall percentage relief on inflation-induced taxes on inventories would have been 39%. In addition, the 3% inventory deduction applies to unincorporated business, service industries, financial companies such as banks, insurance companies, and loan and trust companies. The effects on these are unlikely to be significant in relation to the effects on manufacturing and trading companies.

The proposed 3% inventory adjustment also contains an inherent weakness in that it is universally applied, and does not recognize varying price trends which will exist in different industries. As well, it does not take into account the method that a business uses to finance its investment in inventories. The differences that these factors cause in the extent of relief provided by the 3% deduction can be illustrated by comparing the amount of the estimated tax savings with the estimated tax relief that would flow from an adjustment based on the full effect of inflation on the portion of inventories financed by equity capital. In Figure 16 the proposed relief is shown as a percentage of the estimated tax on inflation gains on inventories.



**Figure 16 (Repeat of Figure 7)****The 3% Inventory Deduction  
Extent of Relief Provided by Industry Sector**

(279 Large Canadian Non-Financial Companies)

Source: Bossons, *Impact of Inflation*, Table 48, and staff estimates.

Note: Estimates based on 1975 taxes.

The 3% reduction provides more relief to business in merchandising and transportation and utilities than manufacturing and processing. There could also be large variations in the relief provided to businesses in the same industry, caused primarily by the use of different methods of financing inventories. As a result, benefits will not be distributed equitably.

Using 1975 figures again, Figure 17 shows the effect on taxes payable had the 3% inventory deduction been applied in that year.

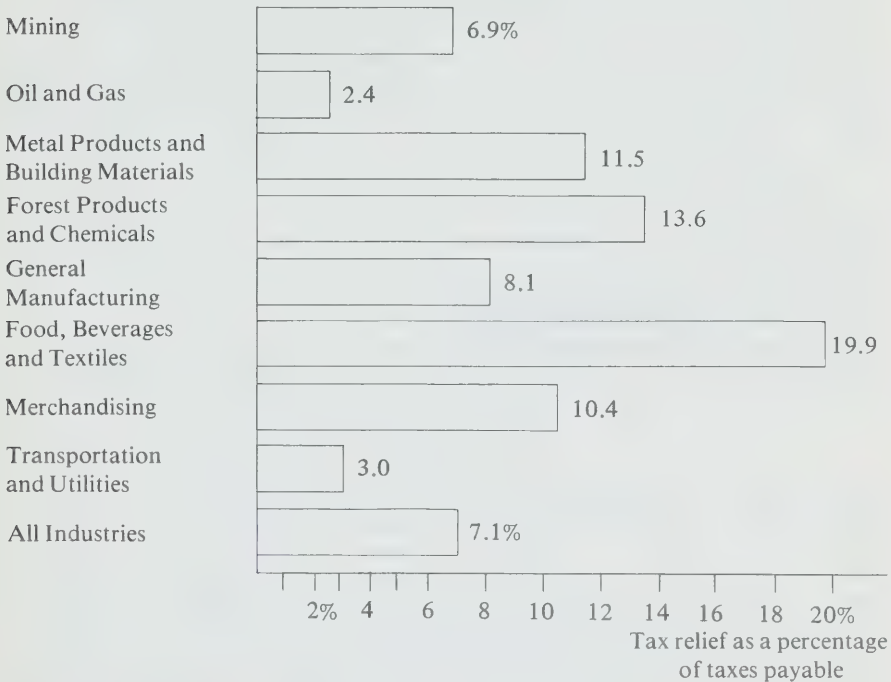
Food, beverage and textile businesses receive the most benefit; the transportation sector the least.

In summary, due to its differing impact on various sectors of the economy, the 3% inventory deduction is at best a form of rough justice.



**Figure 17****Percentage Reduction in Taxes Payable due to the 3% Inventory Deduction**

(279 Large Canadian Non-Financial Companies)

Source: Bossons, *Impact of Inflation*, Tables 46 and 48.

Note: Estimates based on 1975 taxes.

**Impact of 3% Inventory Deduction on Investment in Ontario**

Business, in general, sees this provision as a welcome first step by government toward recognition of the fact that inflation creates cash flow problems related to inventory investment. In a recent study,<sup>31</sup> the C.D. Howe Research Institute commented that no specific conclusions were possible regarding tax concessions of this nature, but they were unlikely to be a major determinant of investment decisions. However, in its practical application, the 3% deduction should have a favourable impact on the cash flow and liquidity of businesses. Thus, businesses, including small business, might use the tax relief for maintaining the level of their inventories, reducing their debt, or otherwise improving their working capital position.

## Fixed Assets

To date, there are no provisions to provide recognition and relief for the higher costs of replacing fixed assets. In his budget documents of March 1977, the Minister of Finance noted:<sup>32</sup>

“With regard to depreciable assets, the generosity of the current capital cost allowance system and the investment tax credit combine to provide a substantial offset to the effects of inflation”.

A comparison was made of the estimated tax on inflation gains in fixed assets owned by companies in manufacturing, processing, trading, and other operating businesses in 1975 and of the deferred taxes applicable to those companies for that year.

**Table 7**

**Comparison of Taxes on ‘Inflation Gains’ in  
Fixed Assets with Deferred Taxes  
(All Canadian Non-financial Companies)**  
(\$ millions)

	Total Federal and Provincial Taxes	Ontario Taxes
Deferred taxes	\$1,800	\$200
Tax on ‘inflation gains’ in fixed assets	1,600	180
Excess of deferred taxes	<u>\$ 200</u>	<u>\$ 20</u>

Source: Staff estimate based on 1975 taxes of 279 large Canadian non-financial companies, projected using Statistics Canada data.

Table 7 indicates that the amount of deferred taxes exceeded the estimated tax on the cash required to replace or maintain fixed assets. As in the case of the inventory deduction, the benefits of deferred taxes may not necessarily be equitably distributed. For example, companies that are not entitled to the incentive allowance applicable to manufacturing and processing businesses will not receive significant relief from capital cost allowances, but they could still be significantly affected by the necessity of replacing their fixed assets at higher costs. As well, those companies entitled to incentive allowances might not receive full relief if they have a long replacement cycle and prices increase significantly during that period. To the extent that capital cost allowances and related incentives are used to offset the effects of inflation, these will not result in incentives for the expansion of investment.

## Ways of Recognizing the Impact of Inflation

### Inventories

Inflation affects the ability of a company to maintain its inventory levels. These may be partially offset by allowing the annual amount

required to cover price increases in inventories as a deduction for tax purposes.

The amount to be allowed for tax purposes theoretically should be based on the current costs of replacing the inventories for the specific business. This procedure should not be unduly complex or costly, and verification by tax authorities should be a straightforward procedure. In certain businesses, it might be more desirable for the inventory adjustment to be computed by using an index, either a general price index or a specific industry index. This would provide a degree of simplicity and certainty in computing the amount of the deduction. Also, a simple calculation might make the work required much more acceptable to small business.

The calculation of any amount to offset the effects of inflation on inventories should be designed so that relief is provided for price changes and not quantity changes. Further, any such deductions allowed for tax purposes should be brought back into taxable income should a business significantly reduce its inventory investment level.

Certain exceptions and exclusions to these tax relief measures would be also appropriate in the case where:

- Inventories are acquired for a specific purpose or project with no intention of their replacement.
- Inventories are acquired for purposes of a joint venture.
- Inventories are acquired for investment rather than trading purposes.
- Inventories consist of land and buildings.

The federal government estimates that the 3% inventory adjustment will reduce federal revenues by about \$300 million in the first full year of operation.<sup>33</sup> This means a reduction of combined federal/provincial revenues by about \$400 million, including Ontario revenues in the range of \$40 million to \$50 million.<sup>34</sup>

The revenue reduction resulting from the method of relief described above would depend on the rate of inflation in the year that the measure is introduced. At an approximate inflation rate of 6.5% in 1978, it is estimated that tax reductions would amount to approximately twice those arising from the 3% inventory adjustment. The total reduction would be less if an adjustment for financing as described below is also introduced.

## Fixed Assets

Under inflation, business has to replace its fixed assets at costs that are greater than the original costs. Tax relief might be provided by permitting the deduction of capital cost allowances that are supplemented by an adjustment that reflects the replacement cost of the assets. Tax relief would be given to those businesses upon which the present tax burden is falling unfairly; it would help to redress the imbalance within industry sectors.

One method of determining capital cost allowances based on replacement cost would be to use a simple price index. This would balance equity of application with ease and cost of implementation. Under

this system, additional deductions should be transferred back to income when the assets are disposed of and not replaced. This tax relief is intended to assist the business in replacing its fixed assets at higher costs. If assets are not replaced then the assistance would no longer be required and the additional deductions should be transferred to income. As well, relief should not be provided in respect of assets that are held for investment purposes or for assets which are not intended to be replaced such as:

- Land (this is normally not a depreciating asset).
- Buildings that have not been acquired for use in a manufacturing or processing business.
- Assets acquired for a specific project with no intention to replace them.
- Assets acquired for purposes of a venture or a joint venture.
- Property that is entitled to a fast write-off (such as 50% or 100% in the year of acquisition) for tax purposes.

As stated, the existing capital cost allowances contain incentive provisions, particularly in respect of investment in assets for manufacturing and processing businesses. These allowances result in significant deferment of taxes. This alleviates the difficulties created by inflation by permitting the accumulation of cash for the replacement of assets. Not all businesses that have asset replacement requirements are entitled to incentive allowances, and these businesses do not receive any assistance or relief in respect of their cash requirements for the replacement of assets. Two types of relief might be considered— such as:

- A specific allowance to provide relief against the impact of inflation.
- An allowance to provide incentive for the stimulation and growth of manufacturing and processing businesses.

Combined federal/provincial inflation-induced taxes on fixed assets in 1975 were an estimated \$1.6 million, taking into account the effect of price increases that had occurred over the preceding six years. If relief was only allowed for future inflation, it is estimated that the loss in revenues from the introduction of relief from investment in fixed assets would be in the range of \$300 million to \$400 million of combined federal/provincial revenues, including an estimated \$35 million to \$45 million of Ontario revenues.<sup>35</sup> These amounts assume a 6.5% rate of inflation in 1978. Governments would continue to receive the windfall revenues of past but not future years' inflation.

The total reduction would be less if an adjustment for financing as described in the following section is also introduced.

## Financing

A business may finance its investment in inventories and fixed assets by non-equity financing,<sup>36</sup> which offer a shelter against the effects of inflation. As well, the fact that a business has had the capacity to borrow for its investment in existing assets indicates that it should be able to obtain additional cash by borrowing when it is necessary to replace



those assets. On the assumption that a business will continue to maintain its current ratio of non-equity financing, any additional amounts allowed for tax purposes might be reduced in respect of additional cash which may be available to the business from borrowings.

The amount of adjustments will depend on the definition of non-equity financing. Business often uses trade creditors to finance inventories and possibly even accounts receivable. Bank borrowings may also be used to finance inventories and accounts receivable. Long-term debt can be used to finance both fixed assets and working capital requirements. It therefore seems appropriate that all current liabilities and long-term debt, excluding deferred income taxes which do not represent amounts paid into the business, be considered to be non-equity financing.

It must be further decided to what extent this financing is used for investing in inventories and fixed assets. It might be appropriate for only the excess of this financing over the total of cash, accounts receivable, and other similar assets, to be considered as the amount of non-equity financing applicable to inventories and fixed assets.

In the event that the aggregate of cash, accounts receivable and other similar assets of a business is greater than current liabilities and long-term debt, there should be no financing adjustment.

This method of arriving at the amount of non-equity financing solves two problems. First, the effect of this method would be to offset trade receivables and other current assets with trade payables and other current liabilities. This eliminates adjusting for the impact of inflation on any of these items. Second, it is unnecessary to identify the specific use of any borrowed funds.

It is estimated that in 1975 approximately 33⅓% of the investment by business in inventories and fixed assets was financed by non-equity financing determined in the manner set out above.<sup>37</sup> If this holds for 1978, the financing adjustment in respect of inventories and fixed assets would be approximately \$400 million of combined federal/provincial taxes, and \$47 million of Ontario taxes.<sup>38</sup> These amounts would reduce the amounts of tax relief indicated in the two preceding sections of this chapter.

## Other Areas

Any proposal for tax relief to be granted in recognition of the effects of inflation on taxable income should be based on the premise that business must maintain its productive capacity if it is to survive. Accordingly, relief should only be considered in respect of the effects of inflation on inventories and fixed assets that are used for business purposes.

No relief should be given for other assets such as marketable securities, long-term investments and goodwill. Some assets can be converted to cash and others are subject to change in value due to many reasons, besides inflation.

## Types of Business

It is businesses in the manufacturing, processing, trading and other similar operating activities that require a fairly significant investment in either inventories or fixed assets in order to carry out their operations. Further, inventories and fixed assets often make up a very significant proportion of the total assets of such companies. This is in direct contrast to companies in the service industries, or companies in the financial sector, such as banks, insurance companies, loan and trust companies. These types of businesses would generally be much less reliant on inventories and fixed assets in carrying out their operations. Thus, while these latter companies might benefit to some extent from tax relief from the effects of inflation, the main benefits would be to those companies that require assistance in maintaining their productive capacity.

## Small Business

Any small business that is dependent on inventories and fixed assets in carrying out its operations will be affected as severely as larger businesses. In this connection, the following observations are relevant:

- If the government provides relief through accelerated capital cost allowances, then not all small businesses would benefit. Generally, such benefits would go to big business.
- Those recommendations that deal with providing benefits for inventories or working capital are more likely to benefit small business as opposed to big business.
- The preferred form of obtaining tax relief would be a calculation on the tax return, which would not be dependent on using a similar calculation for accounting or financial reporting purposes.

## Incentives for Investment in Business Equities

It should also be possible to provide incentive for investment in business equity in Ontario by providing some relief for the inflation component of capital gains and providing further reductions in the taxation of dividends.

At present, an investor in business equities in Ontario normally anticipates a return on investment by means of dividends and a capital appreciation in the value of the investment. The annual amounts paid to the shareholder by way of dividends will be subject to tax in his hands and there will be no relief granted for inflation. In addition, there is tax on any capital gain realized on a sale of the shares in the company, again without any recognition of inflation. If special consideration were given to the tax treatment of dividends from shares in Canadian businesses and capital gains on such shares, then it might be possible to develop business equities in Ontario as an attractive investment.

## Impact of Tax Recognition for Effects of Inflation

The estimated loss of government revenues that could result from the introduction of tax relief for the effects of inflation based on the adjustments described above is summarized in Table 8, which also compares this cost to the estimated cost of the proposed 3% inventory deduction.

**Table 8**

**Estimated Loss of Government Revenues if  
Tax Relief Provided for Effects of Inflation  
(All Canadian Companies)**  
(\$ millions)

	Total Federal and Provincial Taxes	Ontario Taxes
Cost of providing tax relief for inflation in respect of		
Inventories	\$ 850	\$100
Fixed assets	350	40
	1,200	140
Financing adjustment	400	47
Net cost	<u>\$ 800</u>	<u>\$ 93</u>
Net cost of providing tax relief, as above	\$ 800	\$ 93
Cost of proposed 3% inventory deduction	400	50
Additional cost of proposed relief	<u>\$ 400</u>	<u>\$ 43</u>

Source: Staff estimate based on 1975 taxes of 279 large Canadian non-financial companies, projected using Statistics Canada data.

The cost of providing relief for business to the extent that it would permit maintenance of its productive capacity is estimated to cost Ontario \$43 million. In addition, the proposed 3% inventory deduction is estimated to cost \$50 million. The total tax relief would amount to approximately 10% of Ontario's revenue from corporation income taxes. This represents less than 1% of Ontario's gross general revenues.<sup>39</sup>

## Tax Relief in Other Countries

With few exceptions, foreign efforts have concentrated on providing tax relief for the effects of inflation on inventories and fixed assets. In the case of inventories, the relief is normally intended to provide recognition for the price increases in inventories; in the case of fixed assets, relief is usually provided by means of accelerated capital cost allowances and investment tax credits.

### United Kingdom

In 1974, to provide explicit, though limited, recognition of the effects of inflation on the ability of a business to finance its inventories, the

United Kingdom permitted a deduction of a special inventory reserve. This reserve is the amount equal to the increase in the cost of inventories during the year, with no differentiation made between price and quantity increases. The United Kingdom business is granted relief for the full amount of the increase of the carrying value of its inventories except that the deduction is limited to 15% of operating profits after depreciation. These reserves are not brought back into income when there is a decline in the cost of the inventory.

The method used by the United Kingdom to provide relief for an investment in fixed assets is by means of accelerated capital cost allowances. For example, since 1972 the United Kingdom has permitted a 100% first-year allowance for most machinery and equipment, and since 1974 up to 50% on new industrial buildings.

## United States

The United States does not provide any specific recognition and relief for the effects of inflation on the taxation of business income. But, for almost forty years, the United States has permitted last in, first out, [LIFO] inventory costing for tax purposes. This has permitted businesses to charge the most recent cost of their inventories against income for tax purposes, which offsets to a large extent the effects of inflation on the replacement of those inventories. This method is not used by all taxpayers as it is a requirement that LIFO inventory costing be used for financial reporting purposes if it is to be deducted for tax purposes.

Certain problems can arise in the use of LIFO. For example, it can produce unrealistic figures during periods when inventory levels are declining, it can require excessive costs to calculate, and it can be difficult for taxation authorities to verify the inventory figures.

With respect to fixed assets, the United States has a number of accelerated depreciation allowances and some investment credits, but does not have any specific measures designed to provide relief for the effect of inflation.

## Australia

Recommendations have been made by the Mathews Committee, Report of Committee of Inquiry Into Inflation and Taxation,<sup>40</sup> that Australia adopt a modified concept of taxable income based on the current value concept of income. This system has not yet been implemented.

Some relief is provided for the effects of inflation on inventory. In 1976, the government proposed a special inventory reserve to grant some relief for the effects of inflation. The method of computing the amount of the deduction was arbitrarily set with the amount based on the opening inventory factored by one-half of the percentage change of the goods component of the Consumer Price Index. In this case, the tax relief represents a permanent tax saving as the reserve is not subject to recapture.

The Mathews Committee also recommended that capital cost allow-



ances be based on the replacement cost of the assets, but this recommendation has not yet been implemented.

## Brazil

During the high inflation era of the 1960s, Brazil introduced a comprehensive system of indexation into its tax system. This provides almost full recognition of the effects of inflation on taxation and in concept, scope and implementation it goes far beyond any approaches contemplated in other countries at the present time.

## Other Countries

The methods that other countries have used to provide relief for the effect of inflation have generally been based on providing relief through modification to the amounts allowed for depreciation of fixed assets or variations in the methods of valuing inventories.

A few countries have permitted tax relief for businesses that set funds aside in an investment reserve. For example, Swedish companies may put 40% of their pre-tax profits in an investment reserve fund which is exempt from taxes. However, 46% of the money must be deposited in an interest-free government account. The remaining 54% is left as part of the company's working capital. The immediate benefit is one of liquidity because the alternative is generally to pay a tax of 54%. Further, if the funds put into the investment reserve are used for the acquisition of fixed assets under conditions prescribed by the government, some of the funds deposited can be received back tax free.

## Conclusions

It is clear that the impact of inflation on the taxation of business income creates major cash flow and liquidity problems. In addition, inflation also results in an unintended and automatic shift of wealth from business capital to government. To date, tax relief for the effects of inflation has been limited and largely fortuitous, being based on the effect of allowances permitted for other reasons.

The most complete study of inflation and taxation published to date is the *Report of Committee of Inquiry Into Inflation and Taxation* prepared on behalf of the Government of Australia by a committee under the chairmanship of R.L. Mathews. Two of the major conclusions contained in this study are as follows:

- "The suitability of any concept of taxable income depends on the effects which flow from its use. These effects need to be evaluated by reference to criteria of equity, simplicity, efficiency and flexibility, but there is one overriding test which any business tax system must meet. This is the compatibility of the tax system with the maintenance of financial stability in the business sector, with continuity of business investment and activity, in short, with business survival.
- "Taxing, accounting and pricing policies which have traditionally

been adopted in relation to business enterprises, when combined with recent high rates of inflation, are incompatible with the continued existence of the private sector”.

These concerns of the Australian committee apply no less forcefully to Ontario. While there are no easy solutions to this problem, maintenance of the status quo in this province will at best seriously inhibit the economic wellbeing of society and at worst be severely damaging.

## CHAPTER 4

# Impact of Inflation Accounting

The effects of inflation are pervasive and cause errors in decisions and distortions in capital flows. The adoption of a system of inflation accounting would not alter inflation itself, but would provide more accurate information to decision makers on the nature of its effects. The effect of financial reports that reflect the impact of inflation on business is potentially important in a number of areas—government, investors, business decision makers and the general public.

### Government Policy

The adoption of inflation accounting would have an impact in three major areas of government: tax policy analysis, regulation, general statistics and information.

#### Tax Policy Analysis

Tax policies related to business are designed to optimize government revenues while ensuring that, through continued effective economic management and growth of the economy, business sources will continue to provide anticipated levels of revenue. The analysis of proposed tax incentives or other tax policy changes requires accurate information on aggregate stocks and flows as well as on individual firms. To achieve more equitable and efficient tax policies, government places heavy reliance on available economic and financial data. Inaccurate or inadequate data renders the task of designing and operating an appropriate tax system more difficult, moreover it could result in counter-productive taxation decisions.

As in most countries, tax planners in Canada work with financial and economic data that is not inflation-adjusted. The distortions that are evident in this data during a period of inflation should be a cause of concern. Recently, the United States Department of Commerce, Bureau of Economic Analysis, has introduced a number of business-related inflation-adjusted results into its quarterly *Survey of Current*

*Business.*<sup>41</sup> These include adjustments to aggregate profits which are similar to the proposal in this report.

The adoption of inflation accounting, by virtue of its more accurate measurement of financial results, should assist tax planners in formulating more effective policies and legislation.

## Regulation

Regulatory agencies in the major business areas of communications, transportation and energy, have traditionally declined to accept inflation accounting techniques. There are several reasons for this, including avoidance of controversy over appropriate valuation methods (in contrast to the precision of historical cost determination), maintenance of government corporate income taxes, innate conservatism, and the potential adverse public reaction to major utility rate increases.

If the use of inflation accounting is acceptable in the non-regulated sector, then it should have equal applicability in the case of regulated companies. While it may not be officially accepted for rate base and rate of return purposes, it will still have significant value in influencing decision makers with respect to the economic realities facing the industry.

Other important regulatory areas are corporate reporting requirements under the Canada Business Corporations Act, the Foreign Investment Review Act and various securities regulations. The Federal Department of Consumer and Corporate Affairs, which administers the Canada Business Corporations Act, does not require a restatement of financial information on an adjusted basis with respect to its returns. Reporting guidelines are based on the *Handbook* of The Canadian Institute of Chartered Accountants and, until changes are made in that document, no change in the department's requirements are expected.

## General Statistics and Information

Both provincial and federal governments obtain financial and statistical information from business through a variety of agencies. With the exception of certain National Accounts data on the expenditure side which is price-deflated to arrive at constant dollars, government statistics and information are not subject to adjustments for inflation. This means that major policy decisions are being made with respect to taxation and other economic policies on the basis of inadequate and inaccurate performance figures.

There are several reasons why government has not moved to implement revised information procedures. Two of the major reasons are the lack of unanimity on the most appropriate way to report inflation-adjusted data and the reluctance of governments to impose any additional reporting requirements on an already over-burdened business sector.

Many ministries and departments are concerned about the effects of inflation on business performance and recognize the inflation-induced dichotomy between high reported profits and poor liquidity. To give



one example, a change from historical accounting methods would provide an incentive to use improved investment decision methodologies, which in turn would assist government in the evaluation of incentive grant applications. This is particularly important as government provides most of its assistance in this area 'at the margin' and requires accurate information on which to base decisions.

Because many government policies and programs are critical to the country's economic health, it is vital that information supplied to government be accurate, relevant and timely. Inflation accounting can help satisfy these requirements.

## **Capital Financing**

A fundamental requirement of a healthy level of business activity is access to a sufficient supply of capital at reasonable cost. Suppliers and borrowers of capital are brought together through the medium of the capital markets.

Since the onset of high rates of inflation, the efficient workings of the market and the supply of capital for corporate requirements has been severely disrupted. Suppliers of capital are uncertain about the ability to earn a reasonable rate of return. Substantial numbers have withdrawn from the market, placing their funds in investments which provide a better hedge against inflation.

The remaining investors, mainly large institutional investors, have demanded a high and certain rate of return for their investment. This has led to increased costs of fixed interest borrowing and the virtual elimination of new equity issues as an acceptable investment vehicle. Business has reconsidered its capital investment programs, proceeding only with those which can yield the highest rates of return and meet the increased costs of capital.

As a free market operation, capital market equilibrium is brought about by the interaction of supply and demand. In analyzing the impact of inflation on the Ontario capital market, it is therefore necessary to examine the impact of inflation on both the demand for capital and the supply.

## **Demand for Capital**

The demand for funds by the corporate sector depends on the level of investment by business enterprises. The level of investment is affected by several internal business factors, which are examined more fully in the later section on business decisions. Major external variables which affect investment levels include the strength of the economy, government economic policies, the availability of incentives for capital investment and the demand for goods and services produced by the corporate sector.

Recent inflation disrupted not only the capital market, but also the market for goods and services provided by business. The market for these goods and services, in most industry sectors, was thrown into disequilibrium with excess demand resulting as customers attempted to increase inventory levels in anticipation of price increases. This enabled

firms in these industries to increase their prices, often substantially. At the same time, costs incurred by business in producing goods also increased, but largely because of present accounting methods, these increased costs were not reflected immediately in their profit statements and many firms reported the highest level of earnings in their history.

In many instances, these record earnings could not be realized in distributable cash. A major portion had to be reinvested in the business to maintain existing levels of operations. In addition, the effect of the taxation system which required taxes to be paid on conventional accounting methods and the demand by equity investors for increased dividends to offset the impact of inflation combined to force many businesses to resort to additional and previously unnecessary external financing.

The effects of inflation on future cash flows and earnings were unpredictable introducing a major element of uncertainty into investment decisions. Only high yield investment tended to be approved and this was often for upgrading, extension or replacement of existing facilities rather than investment in new ventures.

The cash required for fixed asset investment to replace maturing debt and to finance increased inventory and accounts receivable values has in many cases exceeded internally-generated cash, resulting in a significant increase in the demand for capital.

## Supply of Capital—General

Inflation affects the terms under which lenders are prepared to advance money to business. During inflation, lenders seek investments which yield a high rate of return to offset the reduction in the purchasing power of their capital, or they invest in assets which increase in value with inflation.

The small or marginal investor who traditionally participated heavily in the equities market has withdrawn from the market, and now invests in real property, such as houses, art and jewellery. These are seen to offer a hedge against capital erosion. This shift has contributed substantially to the decline in the supply of capital for equity investment.

In addition, the small investor does not possess the same level of information about the enterprise as the large sophisticated or professional investor. Large investment institutions have more expertise and information to make the necessary adjustments to reported results.

There is also a gravitation of investment funds to large institutions (for example, via pension fund growth) which are primarily interested in fixed interest income, not growth. This means that public financing opportunities for small and medium size businesses are limited and there is less risk capital available, which is essential to innovation and growth.

## Fixed Interest Capital

Fixed interest capital is usually raised by means of a bond or debenture which provides for repayment of a fixed capital sum and nominal rate of interest over a period of years. The bond or debenture is usually

secured on the assets of the enterprise, and there is often a requirement for the company to meet certain interest and asset coverage tests.

The reduction in equity market activity, together with heavy capital demands in both private and public sectors, has resulted in heavy debt market activity and an unprecedented rise in nominal interest rates. Most bond and debenture instruments require borrowers to meet interest coverage tests. The lack of equity financing and the reduction in internally-generated cash flow is forcing many companies to the limit of their borrowing capacity. This has increased the risk element that suppliers of capital require in their return.

**Table 9**

**Yields on Long-term Bonds, Corrected for Inflation**  
(percentages)

	Market Yield	Rate of Inflation	Real Yield
1971	8.24%	3.24%	4.84%
1972	8.30	4.80	3.34
1973	8.47	9.45	(0.90)
1974	10.17	14.30	(3.61)
1975	10.76	10.76	
1976	10.48	9.44	0.95

Source: Bank of Canada Review Statistical Table 20. Real yields — calculated using GNE Implicit Price Index.

Note: Market yield is the McLeod, Young, Weir bond yield average (10 individuals), yearly averages of monthly rates.

Investors are uncertain about real rates of return on both equities and long-term debt. For example, interest rates on fixed interest capital when expressed in real terms are abnormally low (Table 9). As a result, there is an abnormally large supply of capital available for investment in short-term liquid assets.

## Return to Equity Investor

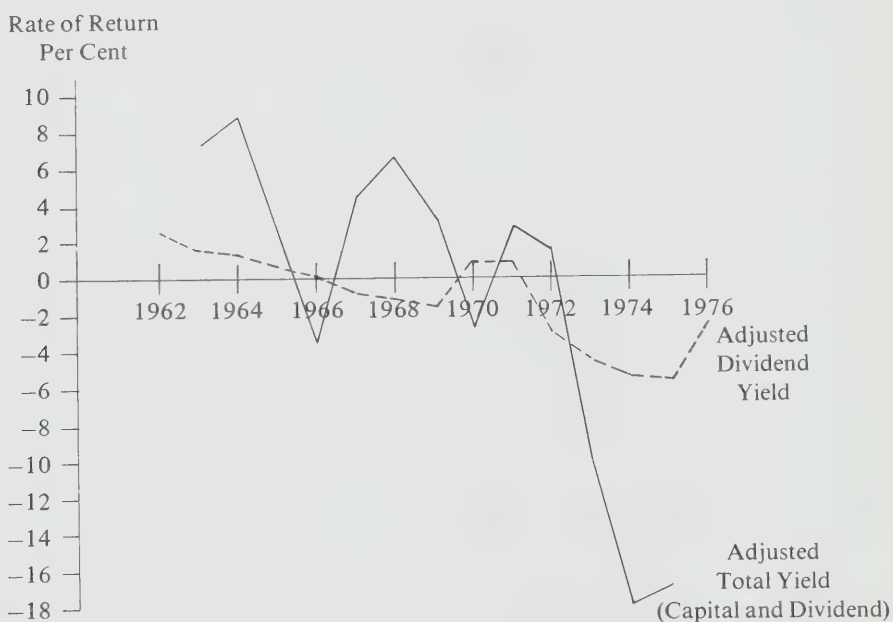
The return to equity capital is in two parts: the dividends paid by the corporation and capital gains realized through increases in the market price of the stock. Theoretically, a capital gain represents real growth of the enterprise, reflecting increases in retained earnings.

Aggregate share prices have performed poorly over the last ten years. When inflation reached a peak in 1974, stock prices measured by the Toronto Stock Exchange '300' composite index were the lowest since 1966. Figure 18 illustrates the yearly nominal rate of return and 'real' rate of return to an equity investor. Both these calculations take into account dividend yield and accrued capital gains (based on stock prices of shares included in the composite index). In addition, the three-year moving average 'real' rate of return shows that, with the exception of 1966 and 1970, there was a real rate of return on equity investments in each of the years from 1961 to 1972. From 1972 onward the rate of inflation has resulted in a negative 'real' return on equity investment.

The negative return on equity investment has resulted in a weak equity market during recent years despite the record levels of reported business earnings of 1973 and 1974. Stock prices have declined in virtually all sectors of Canadian industry. One reason for this is that the rate of return on equity investment has not kept pace with the rate of inflation. In addition, the returns available from alternative forms of investment such as bonds, debentures and real property are higher and do not bear the same risk that is associated with equity investment.

**Figure 18**

### **Return on Equity Investment Adjusted for the Impact of Inflation 1962-1976**



Source: Toronto Stock Exchange  
Stock Price Index System

Note: Adjusted yield equals nominal yield less yearly increase in the Consumer Price Index.

There are two major reasons for the poor rate of return on equity capital. First, there is a lack of real growth in business earnings as reflected in adjusted profits over the last five years. Second, the inflation-induced uncertainty about prices and margins has had an increasingly depressive effect on share prices.

Although Canadian business reported record earnings in 1974, these earnings did not represent funds available for distribution or expansion of the business. Most of the increase in earnings was required to provide for the higher cost of maintaining productive operating capacity (inventories and fixed assets). In 1975, reported net income for 279



large non-financial companies was 120% higher than in 1971. However, when the 1975 income is adjusted for the effects of inflation, there is only an increase of 3% over 1971. For the reasons described in Chapter 1, when inflation-adjusted income is deflated to 1971 constant dollars, it represents a reduction in real income of 29%.

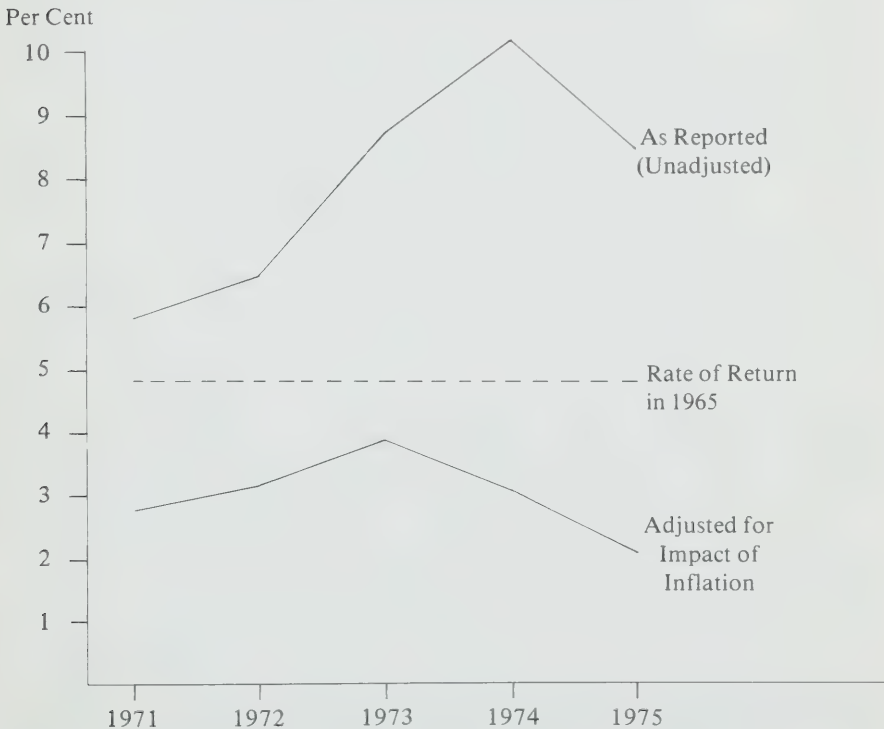
In addition, when dividend payout ratios are compared to inflation-adjusted income for the five years 1971 to 1975, dividends exceeded adjusted net income in 1971 (110%) and in 1975 (160%). Dividends were thus paid out of capital in these years (Figure 21).

An indication of the underlying profitability of an enterprise is the measure of return on capital employed. When corporate financial statements are adjusted for the effects of inflation, rates of return on capital employed are extremely low in most business sectors. Figure 19 shows the rate of return on capital employed for companies included in the sample from 1971 to 1975. Although rates of return on an unadjusted basis may appear reasonable under historical accounting concepts, rates of return are reduced dramatically when earnings and capital

**Figure 19**

**After-Tax Rate of Return on Capital Employed (Ratio of After-Tax Earnings Before Interest to Capital Employed) 1971-1975**

(279 Large Canadian Non-Financial Companies)



Source: Bossons, *Impact of Inflation*, Figure 6.

employed are adjusted for the effects of inflation. This adjusted rate of return provides a more accurate indication of the profitability of business.

## Share Prices and Earnings

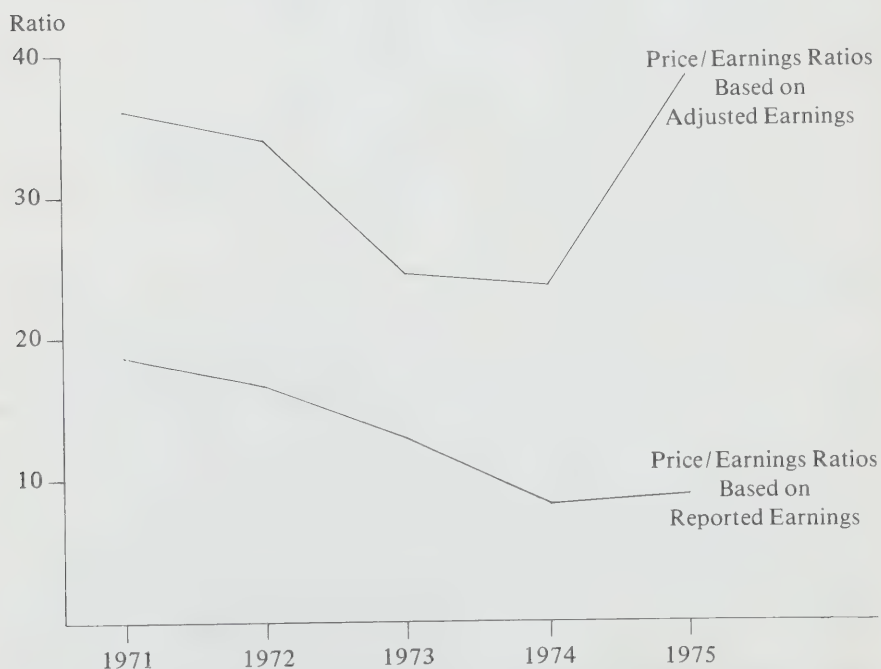
There is evidence that, in the aggregate, investors have discounted reported earnings for the effects of inflation. Figure 20 shows price/earnings ratios for 279 sample companies. There is little correlation between reported earnings and stock prices. However, when earnings are adjusted for the effects of inflation, a stronger correlation is evident, as indicated by the great stability of price/earnings ratios. Comparisons made in the United Kingdom and in the United States show similar results.<sup>42</sup>

The extent to which the share prices of individual firms may reflect adjusted earnings is more uncertain. Inflation accounting, by disclosing lower earnings, may adversely affect the ability of a business to raise

**Figure 20**

### Average Price/Earnings Ratios on Reported and Adjusted Earnings 1971-1975

(279 Large Canadian Non-Financial Companies)



Source: Bossons, *Impact of Inflation*, Figure 11.

Note: Price/earnings ratios are reported averages of ratios of market prices to net income available to common shares.

new equity capital. There is no evidence that investors, given access to information about the impact of inflation on a business, will cause a change in its share price. The requirement for disclosure of replacement cost data by the United States Securities and Exchange Commission has had no noticeable effect on stock prices in the short term.

One of the most important benefits of inflation-adjusted results of disclosure will be that the investor can determine more accurately and with more certainty the rate of return and the real growth of the business. A removal of some of the present uncertainty may encourage investors to return to the equity market.

## **Business Decisions**

### **Dividends**

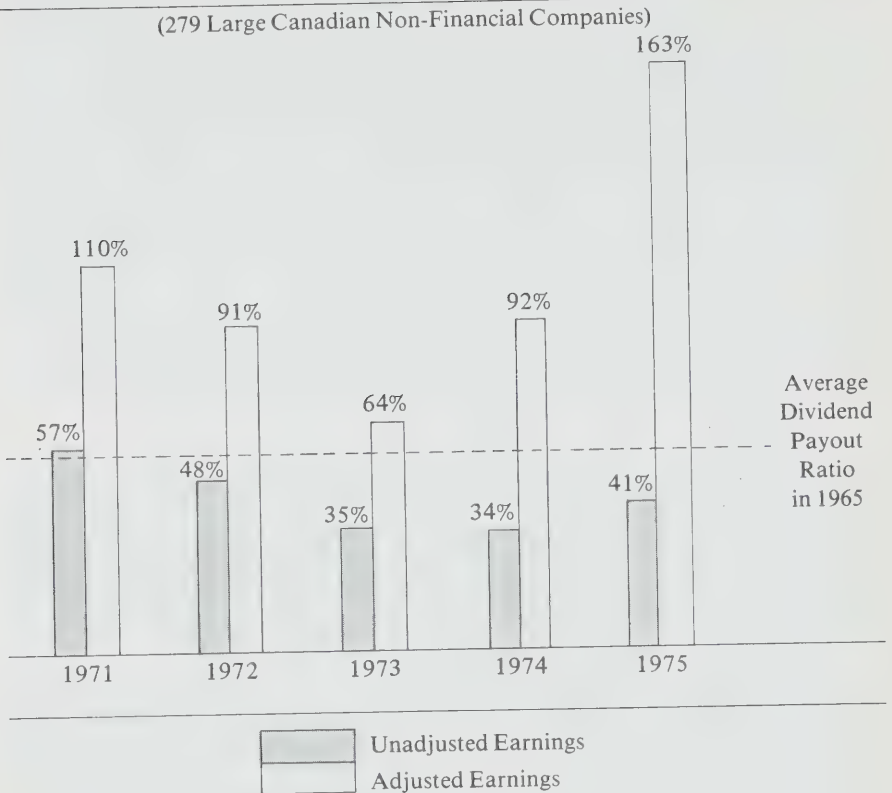
Inflation poses a serious dilemma for the dividend policy makers of an enterprise. The effect of inflation on inventories, accounts receivable and capital expenditures, reduces business liquidity and its ability to pay dividends. But investors require an increased yield to offset the effects of inflation. An increase in dividends can only be made at the expense of funds necessary to finance business expansion.

In making dividend payments, boards of directors are influenced by the operating results presented in financial statements. The evaluation and review of such statements is a required element of the trusteeship role played by directors. The fact that income as reported on such statements is a misleading measure of the financial performance of the firm during inflation may be recognized but is generally not quantified in the course of the boards' review.

Dividend decisions may be influenced by inflation-induced errors in financial statements. There is some evidence that this potential effect has occurred. Figure 21 indicates that nominal dividend payout ratios using reported earnings data declined from 1971 to 1974 as reported earnings rose. This reflected the fact that only 20% of the 1971 to 1974 increase in earnings reported to be available for distribution was actually paid out in the form of increased dividends. Dividend payments continued to increase in 1975, though reported available earnings declined 13% during the year. These figures are consistent with those predicted by traditional models of corporate dividend policy.

Dividend payments in terms of inflation-adjusted figures indicate that in the five-year period, from 1971 to 1975, such payments accounted for 97% of cumulative inflation-adjusted earnings available for distribution.

The year-to-year impact on earnings retained to finance business expansion is shown in Figure 22. In both 1971 and 1975, inflation-adjusted earnings were negative. In only one year (1973) was a significant fraction of inflation-adjusted net income retained by business.

**Figure 21****Dividend Payout Ratios on Reported and Adjusted Earnings  
1971-1975**

Source: Bossons, *Impact of Inflation*, Figure 9.

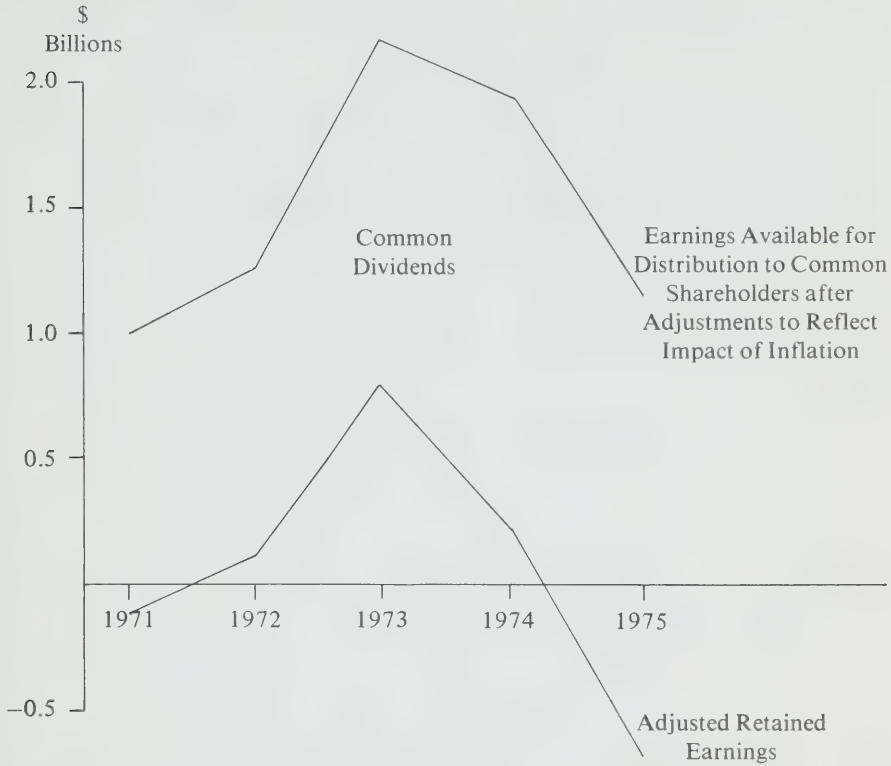
These results suggest that in 'real terms' dividends in many instances were paid out of capital. A more detailed analysis presented in a supplementary paper prepared for the Committee (Bossons, *op. cit.*) indicates that these average results are representative of the situation in most industries. It is unlikely that a prudent board of directors would have continued (and in many cases increased) dividend payments had they been provided with accurate information on inflation-adjusted earnings.

In 1976 many enterprises announced dividend cuts, although dividends on average continued to exceed inflation-adjusted earnings. This is undoubtedly due in part to the reduced level of reported earnings in some business sectors, but may also indicate a greater realization of the extent to which inflation has affected the health of business.



**Figure 22****Dividend Payments and Inflation Adjusted Earnings 1971-1975**

(279 Large Canadian Non-Financial Companies)

Source: Bossons, *Impact of Inflation*, Table 49.

## Financing

Inflation requires a business enterprise to raise additional capital just to maintain the same level of operating capacity. Increased costs, associated with replacing property, plant and equipment and the financing of higher value inventories and accounts receivable, have required businesses to either retain more of their earnings in the business or to obtain additional external financing.

The three traditional methods of raising capital have all been severely affected by inflation. The terms required to raise equity capital have become unattractive to most business firms. Bank loans and long-term debt in the form of bonds and debentures are available but at an abnormally high nominal interest cost. Retained earnings, the other major source of capital, has also been eroded as a significant portion of cash flow from operations is required to refinance existing levels of operations.

The sources of funds available for business expansion are shown in

Figure 23. Because adjusted retained earnings are net of certain non-cash charges (notably deferred taxes and minority interest in earnings), total funds retained from operations for business expansion are significantly larger than retained earnings. Even so, retained funds from operations amounted to only 22% of funds for business expansion over the 1971 to 1975 period for a sample of 279 large non-financial corporations. The major portion of expansion funds is accounted for by increases in long-term liabilities.

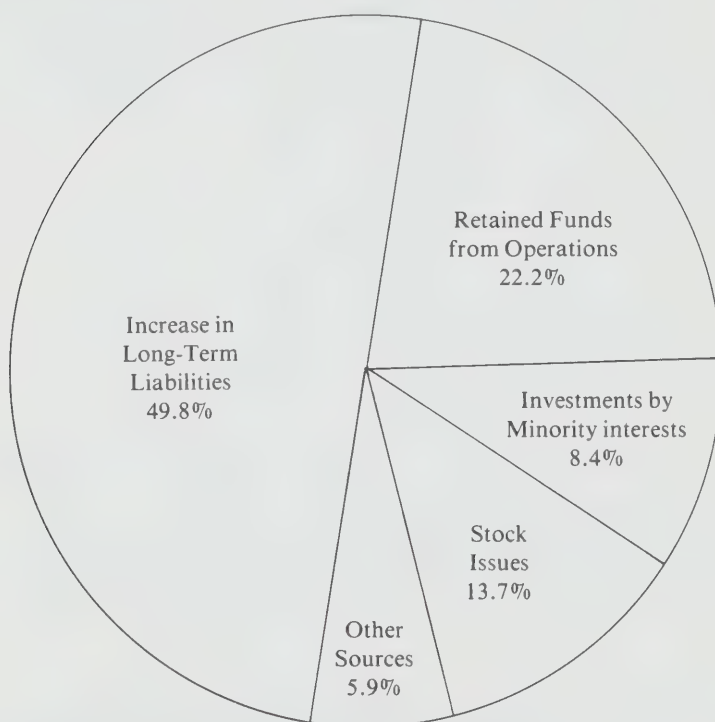
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**Figure 23**

**Sources of Funds for Business Expansion 1971-1975**

(279 Large Canadian Non-Financial Companies)

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Source: Bossons, *Impact of Inflation*, Table 54.

Note: 'Stock issues' and 'other sources' include non-cash transactions resulting from mergers and acquisitions.

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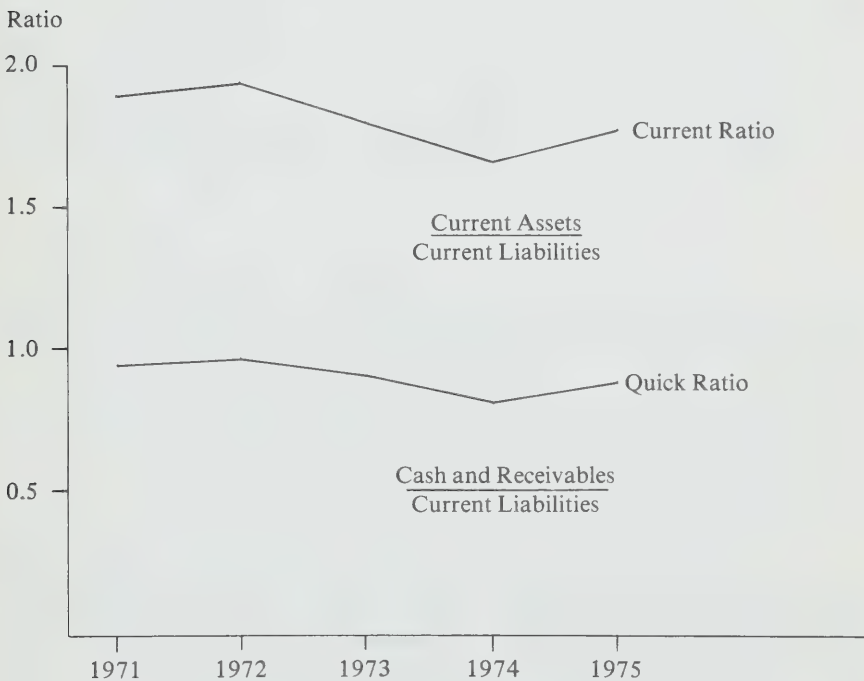
'Expansion funds' can be defined as funds available for expansion after providing for dividends and for provisions for capital maintenance. Such funds are used primarily for capital expenditures (net of expenditures deemed to be required to replace existing assets), for the financing of mergers and acquisitions, and for increasing working capital. In interpreting Figure 23, a substantial fraction of expansion funds represented self-financing of mergers. This represents a significant fraction of investment by minority interest, of stock issues, and of 'other sources'. Such investments are in fact non-cash transactions such as share exchanges.

In the early part of the current inflationary cycle, business obtained a substantial portion of its additional capital requirements in the form of short-term borrowings, although liquidity ratios were not materially affected (Figure 24). With accelerating rates of inflation in late 1973 and 1974, short-term indebtedness tended to be replaced by longer-term borrowings in the forms of bonds and debentures. Debt/fixed asset ratios have, however, remained at relatively stable levels (Figure 25). The relative stability of this ratio is somewhat illusory, in that interest coverage ratios have decreased because of the effects of increases in nominal interest rates. The reduction in interest coverage ratios and the corresponding increases in coverage requirements, coupled with the deteriorating profitability of a large sector of the Canadian economy in 1975 and 1976, have, in certain cases, placed restrictions on future borrowing capability.

**Figure 24**

**Liquidity Ratios 1971-1975**

(279 Large Canadian Non-Financial Companies)

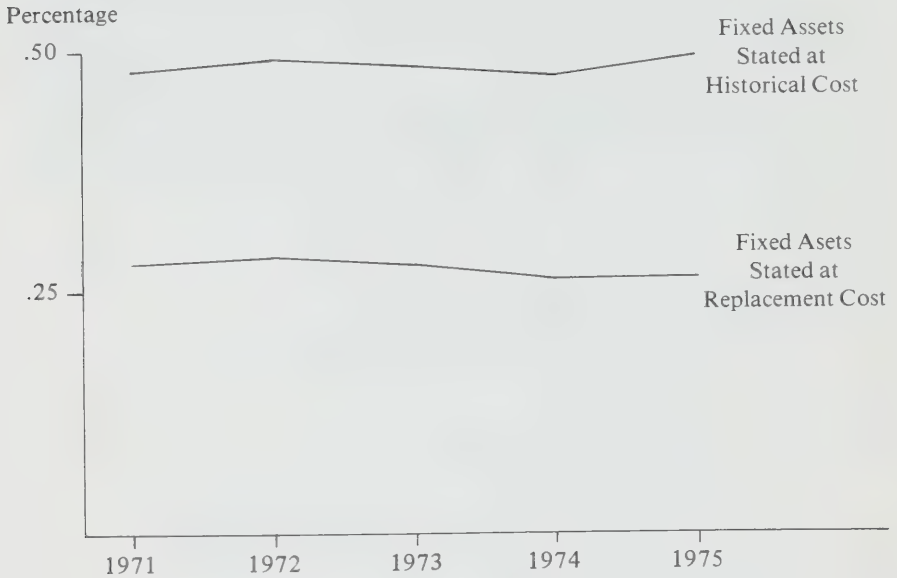


Source: Bossons, Impact of Inflation, Table 59.

Under present circumstances, a management's options in choosing an appropriate capital structure are abnormally limited. External sources of financing are either unattractive or extremely costly. Profitability is

**Figure 25****Ratio of Long-Term Liabilities to Fixed Assets 1971-1975**

(279 Large Canadian Non-Financial Companies)

Source: Bossons, *Impact of Inflation*, Table 60.

reduced by slack demand and excess capacity, while management is under considerable pressure to maintain dividend payments.

## Investment

The impact of inflation upon this decision making process is complex. It is evident that with the higher cost of capital during inflationary periods that the rate of return to be earned has to be correspondingly higher in order to justify the capital outlay. Inflation tends to restrict investment to those projects which yield the highest rates of return. In the case of small business, the high cost of capital restricts new business entry into the market and limits established business from investing in new areas.

A major effect of inflation is the high degree of uncertainty it creates in the minds of management. Normally, investment decisions have long-term rate of return implications. Risk and uncertainty are inevitable elements in any investment decision, but inflation can increase



these to unacceptable levels. As well, programs established to control inflation may place restrictions on business growth and investment.

Inflation accounting would affect investment through its impact on the availability of capital for business financing. Beyond this, the disclosure of the effects of inflation could result in pressure from outside interest groups who become more aware of the true profitability of current operations. The disclosure of the real rate of return on capital employed may act as an incentive to management to evaluate current operations more critically and to seek more profitable investment opportunities.

## Pricing

The disclosure of the impact of inflation on individual enterprises will have little, if any, direct effect on pricing policies. This is particularly so in the case of small business. Product prices are normally determined by supply and demand and most firms have to accept the price set by the market. The present weak demand for products and the levels of excess capacity are further acting to depress prices.

Small business is severely affected by weak market conditions and high production costs. A small business is not normally monopolistic and can only increase selling prices in line with its competitors, not simply because of increasing costs. To the extent that inflation creates increases in material, overhead and labour costs, a squeeze is put on the cash flow of these businesses. The small business must obtain access to additional sources of funds to survive.

## Productivity

Disclosure of the effects of inflation may place increased pressure on business management to improve performance. Because the message of the 'bottom line' performance can have significant behavioural impact on managers, the disclosure of inflation-adjusted results may contribute to improvements in productivity, performance and real earnings.

If managers have been misled by illusory profit growth into believing their firms are better off than they really are, disclosure may contribute to greater efforts to improve productivity through new capital investments or improved operating performance.

These effects should be enhanced by increases in business capital formation that result from the impact of better disclosure on the capital markets. In the longer run, increases in productivity are critically dependent on continued growth in business capital formation. To the extent that capital formation is enhanced by better disclosure, this would facilitate long-run increases in productivity.

General productivity increases are distributed to the owners of businesses, consumers and labour. The extent to which productivity increases are passed on in the form of lower prices, as opposed to being captured in the form of lower prices and higher wages, results in a general increase in real income of consumers.

The adoption of inflation accounting will provide a business with improved measures of performance. This does not automatically mean

better decisions on dividends, financing, investment or pricing; but it does provide the opportunity to be better informed of the effects of inflation before decisions are made.

## General Public

No one in the community escapes the effects of inflation. It is pervasive, and each citizen, as consumer, wage and salary earner, or investor, feels its effects. An individual experiences the effects of inflation as a result of: price increases, failure of income to match rates of inflation, shifts in income shares between individuals and groups, and capital erosion.

This situation poses a real threat to social stability in that it introduces new and unknown factors into the individual's perception of society. It can change widely-held social values and attitudes, depress future expectations, and introduce conflict and division into society as individuals and groups attempt to maintain traditional social and economic parities. Inflation, then, has strong social and psychological implications in addition to the more clearly visible economic influences. Each of these factors is interrelated and must be dealt with in the general fight against inflation.

Additional complexity is introduced into the public arena because the causes of inflation and its remedies are not known with precision. This causes additional misunderstanding and uncertainty. As well, because inflation is not totally understood, a continuation of traditional curative responses may result in its prolongation. It is known that the cure for inflation, at least in the short term, may be as painful as the disease. There are dislocative side effects such as unemployment and restrictions on incentives. Each of these may assist in reducing inflation but they do little to restore economic health.

With minor exceptions, individuals in society are affected negatively by inflation. It is therefore imperative that private and public decision makers—society's policy makers—plan and take action that will restore and increase economic growth, and social and psychological vigour to society.

## Business and the Public

Business is in a sensitive position under inflationary conditions. Of necessity, prices increase regularly and often frequently, as business attempts to maintain its previous earnings levels. In the short term, higher prices when matched with original lower costs result in higher earnings for business. These profits are presented in annual reports, accepted and used by government for economic policy and taxation purposes, and discussed by the media as correct. This is one reason for the unsympathetic reaction to business by the general public.

It is a widely-held perception, confirmed by opinion polls and surveys, that the public believes that business profits are too high. For example, a recent study carried out in November 1976 by Gelfand, Derry & Associates<sup>43</sup> on behalf of the pulp and paper industry revealed a general overall tendency to perceive that sector's profits as being too

high. However, as Figure 3 in Chapter 1 of this Report indicated, the forest products and chemicals sector has, in fact, experienced abnormally low profits in real terms during recent years.

The fact that business profits are, in real terms, much lower will obviously not be recognized by the public so long as conventional accounting continues to overstate real earnings.

Financial reporting based on inflation-adjusted results could serve as a step toward clarifying public perception of business. On the other hand, as an objective measuring device, it would do nothing to condone or disguise actions by business which may be detrimental to society. The achievement of public credibility requires an honest and concerned effort on the part of business to report its activities.

Disclosure of the effects of inflation deals in part only with the wider problem of public perception of the role of business in society. During recent years, demands on business to explain its actions more fully to the community have increased. Now the issue of accountability is of significant importance.

If the business institution is to be perceived as a generator of wealth and a contributor to the wellbeing of society, then it should be prepared to describe and disclose its objectives and actions in simple and straightforward terms. Disclosure might address a variety of subjects including:

- The financial and economic contribution of the business including the role of profit, cash, investment and growth.
- The issues of employment, productivity and technological change.
- Products—export and domestic, consumer-oriented and producer-oriented—together with research and development of future plans.
- Attitude of the business and its effect on communities in terms of costs and benefits.
- Environmental issues relating to pollution and use of resources.
- Taxation levels including the full financial contribution to local, provincial and federal government programs.
- Investment—future plans and growth—both in Canada and in external markets.

Other ways of improving the public perception of business would be a greater orientation to business activities in the education system, a program to widen the ownership of business by individuals in society, and more knowledgeable reporting by the media. The events of the last few years have indicated that Canada cannot afford to take for granted its major wealth-generating institutions.

In summary, the overall crisis in business confidence is linked to the absence of an effective form of business accountability to the public. This issue must be addressed before the public can understand the importance of a healthy business community and the role of business profit and investment in the economy. This will require the following initiatives:

- A more adequate description of profit and its role in wealth-generating investment.



- An effective accounting for results which describes the financial and tangible benefits of business operations and adjusts for the effects of inflation.
- Improvements in communications and accountability by business, including a more explicit description of its overall purposes.
- Improved education on the role of business and a possible broadening of its Canadian ownership.

A program to explain the role of business in society demands more than traditional slogans about liberty and freedom, while tending to treat the general public as economic illiterates. A new era of pluralism has been entered, involving many interest groups. Business must be more open and willing to describe and explain its actions. It must also be prepared to advocate its policies and programs. In this way, it can create and sustain a positive constituency in society over the long term.

## Summary of Effects

The major effect of adopting inflation accounting techniques will be to improve the quality of information available to businessmen, investors, government and the public. The effects of improvements in such information are subtle, and often hard to quantify. This, however, should not be taken as cause to ignore their importance. Precisely because the effects of improvements in information are generally subtle, their importance may be underrated.

Better disclosure of the effects of inflation will not in itself solve the problems created by inflation. Nevertheless, as has been noted in previous chapters, the provision of inflation-adjusted data should have a helpful, ameliorating effect. The basic reason for this effect is that more accurate information about the problem could reduce some of the uncertainty faced by businessmen and investors. If so, this would partially restore confidence in the predictability of the results of business and investment decisions.

## Prices and Wages

It is unlikely that disclosure of the effects of inflation in financial statements would have significant impact on pricing decisions. For products whose prices are set in international markets, no impact is possible. Even for products traded only in domestic markets, little or no impact is likely. Prices are set on the basis of market demand and of short-run costs given current capacity. The state of the market and the amount of excess capacity, together with marginal production costs, are the primary determinants of prices. None of these variables is likely to be influenced by the adoption of inflation accounting in the short run.

It is possible that inflation accounting would have some impact on costs through effective wage negotiations. The extent to which bargaining stances taken by both sides in collective bargaining are affected by current reported profits varies.

However, improvements in the accuracy with which these profits are measured should help to minimize inaccurate perceptions of business

profits by either side. At a minimum, a more accurate measurement of business profits should lead to a better perception of the size of the pie to be divided up between business owners and labour.

While there may be little or no direct impact of inflation accounting on business pricing decisions, prices may in the medium term be affected by any improvements in productivity and performance which results from increased external pressure on management.

## Availability of Investment Funds

A major effect of inflation is the substantial increase in uncertainty perceived by investors, because of variation in relative prices and because of real rates of return on investment. These uncertainties are enhanced by the measurement errors known to exist in the reporting of financial results. Although such errors can be estimated in rough terms by analysts, such rough estimates are not a good substitute for accurate measurement and may contribute to the perceived level of risk on the part of the investors.

The normal response of investors to uncertainty during recent inflation has been to allocate abnormally large fractions of their asset portfolios to inflation hedges such as real estate, rare art, and highly liquid, short-term assets which have a poor return but less risk. As a result, there has been a net outflow of individual funds from the equity market and a reduction in available long-term funds from the capital markets. This has had a particularly marked effect on the availability of long-term capital to medium-sized firms.

The effect of the reduced access to long-term expansion funds in the capital markets has been exacerbated by a reduction in retention of earnings available for expansion and distribution to shareholders. Boards of directors may not have perceived the extent to which inflation has eroded available net income, or the pressures of reduced returns on equity may have put pressures on management to pay out higher dividends. However, dividend payout ratios have (in real terms) been at abnormally high levels.

The dividend increases which took place in 1974 and 1975 might have occurred regardless, but it is likely that some of these dividend increases would not have taken place had better information on inflation been available to boards of directors.

By reducing perceived risks, disclosure of the effects of inflation should bring more individuals into the equity market and contribute to an improvement in the availability of equity funds. Likewise, by providing more accurate information to management and directors, dividend decisions and financial planning may be brought into line with changes in the operating performance of a firm faster than might otherwise be the case. Such effects should have a direct impact on the availability of funds, and should also have a favourable impact on investors' perceptions of the quality of a firm's financial planning. Such indirect effects could have an important impact on the general climate of confidence in the capital markets.



## Aggregate Savings and Investment

An increase in available capital should contribute to increased business capital formation, particularly because an improvement in the quality of information should also have a favourable impact on the climate in which business investment decisions are made. It should nevertheless be emphasized that this increase in business investment is likely to be primarily the result of reallocation of existing total investable funds.

The impact of inflation is not as much on the level of aggregate savings as on the allocation of savings. By reducing the perceived uncertainties associated with long-term investments, the adoption of inflation accounting should cause a higher fraction of savings to be invested in business capital formation. In so doing, it should result in a somewhat reduced demand for liquid assets and for real property perceived to be an inflation hedge. The consequence of this reallocation of savings should thus be a reduced real cost of capital to firms, coupled with reduced demand pressure on the prices of housing and similar assets.

The adoption of inflation-adjusted accounting should contribute toward a return to a more normal allocation of capital that in turn could contribute to economic growth.

## Effects on Different Individuals

The return to a more normal capital market and the elimination of inflation-induced distortions in the allocation of capital funds would be of substantial benefit to individuals who are savers. One major effect of the recent inflation has been to impose a significant real loss on individual savers. This loss has occurred not only in the form of reductions in the value of investment assets directly owned by individuals, it has also occurred in the form of a reduced value of pension savings managed for individuals by institutions. These inflation-induced losses have significantly worsened many individuals' ability to provide for their retirement.

This impact of inflation has been especially severe for individuals who are either already retired or who are close to retirement, and who have accumulated substantial retirement savings. The redistribution consequences of inflation are substantial, and have been particularly great for low income retired individuals whose access to inflation-hedged investment assets is limited.

While the adoption of inflation accounting will not eliminate these inflation-induced redistributive transfers, it should at least increase the extent to which individual savers can feel confident in investing their savings in the equity market. In so doing, it will broaden the range of choices effectively open to individual small investors, and should permit greater diversification of their asset portfolios against inflation risk.

## Tax Implications

The effect of introducing inflation-adjusted accounting techniques would be substantially enhanced if such adjustments were carried

through as adjustment of taxable income. As has been previously described in Chapter 3, *Inflation and Taxation*, it would be difficult for governments to sustain the revenue loss resulting from a full correction of taxable income for the effects of inflation, as is proposed for reported financial results. However, it would involve relatively little revenue loss to introduce an adjustment of taxable income that took account of inflation after the introduction date of the tax change. That is, the revenue loss could be minimized by excluding adjustments that would reflect inflation that occurred before (say) 1978.

Even though the revenue loss to the government of such a tax proposal would be relatively small in the first year, such a tax change would be important in its long-term effects. By changing the tax system in this way, any further increases in effective tax rates that would result from future inflation would be eliminated.

Such a change would have two important effects. First, the actual tax reduction would increase funds available for business expansion, and so would increase business capital formation. However, since the estimated revenue loss of this tax change would initially be small, the effects of a small change in taxes on capital formation would also be small.

The more important effect of the tax change would be in future years. By removing the built-in tendency of the tax system to generate increases in effective tax rates as a result of inflation, the changes in the tax system would eliminate an important component of business risk that currently discourages investments in the long-term assets. The effect of removing this risk should be substantial. On the one hand, it would increase the expected rate of return on the new investments in plant and equipment, by eliminating whatever tax increases would be implicit in the expected rate of price inflation assumed by investors in making capital investment decisions. In addition, it would remove the additional risk that would otherwise be associated with errors in predicting the future rate of inflation. Thus, one of the important negative effects of the current interaction of taxes and inflation would be eliminated: namely, the disincentive effects resulting from the potential reduction in future incomes arising from increases in effective tax rates induced by future inflation.

Beyond this direct effect on capital formation, the introduction of a tax change that eliminated the potential for unanticipated inflation-induced tax increases would likely have a further indirect effect on business capital formation to the extent that it favourably affected business and investor confidence. The implementation of such a tax change, though not involving a large revenue cost, would be an important symbol of commitment by governments to remove ways in which government revenues are automatically benefited by inflation. This commitment would be further enhanced if governments also reflected inflation-adjusted accounting in the personal income tax system by providing for the cost base of capital assets to be indexed for inflation for capital gains tax purposes.

## Economic Costs

The major economic costs of inflation are in the effect of capital formation. By eroding the value of existing financial assets, and by increasing the uncertainty with which future rates of return may be predicted, inflation provides a significant disincentive to saving. In addition, it provides a substantial disincentive to the investments of savings in longer-term risky investments. Because business capital formation is the primary vehicle through which growth in productivity and incomes is attained, the economic costs of inflation are serious and insidious.

The elimination of inflation must be a high priority of governments. However, it would be unrealistic to predict that governments in Canada will be able to eliminate the current inflation quickly. Inflation, once prolonged, is difficult to eradicate without substantial costs in the form of high unemployment. Even bearing these costs, it cannot be eliminated very speedily. Moreover, even if inflation could be eradicated instantaneously, the risk of inflation would still remain—a risk to which savers and investors have become acutely conscious.

In this context, the adoption of inflation-adjusted accounting can be a productive innovation. While not solving the problems created by inflation, it can ameliorate their impact on business capital formation and so reduce some of the economic costs of inflation.

# Financial Disclosure of Effects of Inflation

The systems of inflation accounting currently under consideration are based on a diversity of methods and conventions. The system of current cost accounting proposed in the United Kingdom involves a fundamental redefinition of the concepts of capital and income. This is also true of the proposals under review by The Canadian Institute of Chartered Accountants. Depending on which definition of capital and income is chosen, profit for a firm may vary considerably. The final choice of a method of inflation accounting has yet to be made. In the interest of uniformity, choices in Canada will be limited by the actions taken in other jurisdictions.

In light of this situation, the Committee was faced with a decision either to proceed with a method of inflation accounting disclosure or to do nothing. The second alternative was rejected in view of the conclusion that better information about the effects of inflation was necessary.

## Alternative Methods of Disclosing the Effects of Inflation

Conventionally the term 'net income' reflects earnings which have not been inflation-adjusted. The term 'adjusted net income' has been used to describe the effect of inflation in aggregate terms and for individual firms. This term has also been used in this Report to describe the inflation problem.

The effect of inflation on a business can also be described in terms other than that of net income. One alternative is to express the effect of inflation on the funds generated from operations. The immediate impact of inflation is generally reflected in reduced liquidity and there is often a substantial difference between available funds and reported net income in times of rising costs. Since cash is a vital ingredient in the wellbeing of a business; it is important that this fact be disclosed.

The effects of inflation can be reported in a number of ways: they can be shown in the financial statements, in a separate statement or in a note attached to the financial statements. In the first case, the effects of



inflation would be integrated into the financial accounting system. In the second, the statement or attached note could simply disclose the information, leaving it up to the user of the financial statements to make effective use of the additional data.

In summary, the disclosure choices include:

- Adjustment to the income statement and reported net income.
- Adjustment to funds flow in the statement of changes in financial position.
- A separate financial statement describing adjustment to income or funds flow.
- Notes to the financial statements describing the effects of inflation.

## Adjustment to Net Income

Under this method of disclosure, net income reported in the statement of income is adjusted for the effects of inflation. This has the advantage of utilizing a well-established measure of performance—net income—to convey the impact of inflation. It does, however, have certain operating disadvantages at this time:

- An adjustment to net income represents a considerable change in accounting principles, most of which have been in place for many years.
- Currently a lack of agreement exists about what constitutes the correct definition of inflation-adjusted net income, and numerous concepts have been proposed.
- An adjustment to net income in the main body of the income statement could cause significant problems—for example, as under existing legal agreements, borrowing covenants—where interest coverage or dividend coverage tests are based on current generally accepted accounting principles.

## Adjustment to Statement of Changes in Financial Position

The sources and uses of funds of a business are described in the statement of changes in financial position. Because the effects of inflation on a business are in part related to its sources and uses of funds, one possible method of disclosure is through the use of this statement.

- The statement is not currently structured in a way that would highlight the effects of inflation. Even with a restructuring of the statement format, it is doubtful that the effects of inflation would be clearly and effectively communicated by this method.
- The statement of changes in financial position does not have a high profile in the annual financial statements of corporations. It is not well known or understood by the general public, government or other secondary users of financial statements. Because of this it does not provide a recognized measure of business performance.

## Separate Statement Disclosure

Disclosure by means of an additional statement included as a separate but integral part of the annual financial statements would set out the impact of inflation.

- This method of disclosure need not alter the existing financial statements and accounting principles, but would be an adjunct to that system.

## Disclosure Through Notes to Financial Statements

Under this approach, the adjustment to income or funds from operations could be set out in a note to the financial statements.

- This would be less of an intrusion into the financial reporting system.
- However, note disclosure could reduce the impact of the information.
- While professional investors make good use of the information provided in the notes to the financial statements, the degree of impact of the disclosure will depend on the extent to which the information would be brought to the attention of other users of financial statements.

## Proposed Financial Disclosure

In considering the various ways of disclosing the effects of inflation, the Committee concluded that the development and ultimate adoption of a comprehensive inflation accounting system was a responsibility of the accounting profession. However, in the short term an interim method of disclosing the effects of inflation was needed. It was further concluded that the proposed method of disclosure should avoid a fundamental redefinition of capital and income and not involve implementation of full-scale changes in the accounting system or financial statements. The conventional accounting system has numerous deficiencies, particularly during inflation, but it is known and understood and considered to be objective by those who use it. In addition, it has the advantage of being in place.

For these reasons and because of the need for a better reporting of the effects of inflation, the Committee concluded that the most appropriate form of financial disclosure at this time would be a separate supplementary statement. This statement which is illustrated in Exhibit I, would set out the effect of inflation on funds available for distribution and expansion of the business. Net income would not be adjusted.

## Statement of Funds Available for Distribution or Expansion

The purpose of this statement is to describe how funds generated from operations must be allocated to ensure the maintenance of the firm's capital—its productive capacity—during inflation.

**Exhibit I****Statement of Effects of Inflation on Funds Available for Distribution or Expansion**

Funds generated from operations (from statement of changes in financial position)		\$150,000
Funds required to finance original cost of productive assets (historical cost depreciation)		<u>50,000</u>
		100,000
Funds required to finance increased cost of maintaining operating capacity (Note X)		
Inventories	\$25,000	
Plant, machinery and equipment	<u>45,000</u>	
	70,000	
Less additional funds which may be available from borrowings	<u>20,000</u>	
		<u>50,000</u>
Funds available for distribution or expansion		<u>\$ 50,000</u>

*Notes to Financial Statements*

- Note X: a. The increased cost of replacing inventories (\$25,000) represents the difference between the historical cost and the current cost of goods sold at the date of sale.
- b. The increased cost of maintaining the operating capacity of productive assets (\$45,000) represents the difference between depreciation determined on an historical cost basis and depreciation indexed for the effects of inflation, using the business investment component of the GNE Implicit Price Index.
- c. The extent to which additional funds may be available from borrowings (\$20,000) is based on the ratio of equity to non-equity capital at the beginning of the accounting period on the assumption that this ratio is maintained.

The statement begins with funds generated from operations as shown on the present statement of changes in financial position. This amount is reduced by the following:

- The funds required to finance the original cost of productive assets—this is the historical cost depreciation used in determining conventional net income.
- The funds required to finance the increased cost of maintaining operating capacity because of the higher cost of inventories and increased cost of plant, machinery and equipment. This amount is reduced by the extent to which additional funds may be available from borrowings—assuming that the present ratio of the firm's equity to non-equity capital is maintained.

The final result is the funds available for distribution or expansion.

In summary, this statement will focus attention on the key problem of operating an enterprise during periods of high inflation—the amount

of funds available to meet the financing requirements to maintain productive capacity and to provide for an adequate distribution to shareholders and for expansion. The reasons for adopting this method of disclosure are as follows:

- The statement focuses on the effects of inflation on business financing, that is, on the problems of funds flow and liquidity. It illustrates additional funds that may be required to maintain the operating capacity of the firm and relates the requirements to the funds generated from operations.
- By setting out the effects of inflation in a separate statement in the financial report, these effects are highlighted and become part of the official measurement system of business. 'Funds available' will indicate the damage of inflation on a business. 'Funds available' can also be aggregated by industry sector for use in economic policy and public debate.
- A separate statement of the effects of inflation and the use of a measure of 'funds available' ensures that the conventional accounting system remains intact and that generally accepted accounting principles with respect to the definition of net income remain as they are until more widespread agreement is achieved on definitions of capital and income.
- Disclosure of the effects of inflation by separate statement represents a useful interim step which in no way pre-empts or confines the efforts by business and the accounting profession to develop a more comprehensive method of accounting and financial reporting which deals with inflation.
- The measure of 'funds available' lends itself to the use of relative measures of performance. Currently, many enterprises disclose funds or cash flow per share information and the adjustment of these measures for the effect of inflation would be extremely useful. Return on capital employed could be expressed on both earnings and 'funds available' information. Such relative measures would provide useful measures of the results of business operations.

## Inflation Adjustment

The proposal for financial disclosure is based on three adjustments designed to show the effect of inflation on the 'available funds' of an enterprise. These adjustments are:

- Inventories—the additional funds required during the reporting period to finance cost increases in inventories.
- Fixed assets—the portion of additional funds relating to the current reporting period, which will be required to maintain the operating capacity of productive assets.
- Financing—the portion of additional funds to finance inventory and productive assets which may be available from borrowings if the proportion of operations financed by non-equity capital remains constant.



The suggested method of calculating each of the above adjustments is discussed in Appendix D.

## Relative Measures of Performance

Because of the difficulty experienced in interpreting the meaning of absolute amounts of net income or 'funds available', relative measures of performance may be found to be useful and more easily understood.

### Rate of Return

Rate of return is a useful and important measure of performance for certain types of enterprises, but the multitude of definitions of this business performance criterion—each useful for different purposes—has prevented the disclosure of such a measure from becoming an integral and universally-accepted part of financial statements.

The usefulness of relative measures such as rate of return in communicating the profitability of an enterprise is considerably enhanced during periods of inflation. In particular, it provides a means of comparing the rate of return on capital employed in the business with alternative investment returns, including interest rates available on fixed interest investments with little or no risk attached.

'Return on capital employed' is the most frequently used measure. However, when calculated on the basis of historical costs, this can give a distorted picture of the firm's 'economic' rate of return: increases in costs of assets—the capital employed in the enterprise—is understated. As well, because the income figure used in the calculation is arrived at after charging cost of sales and depreciation based on understated capital values, income is also overstated. The combination of these two factors leads to a significant overstatement of return on capital employed when calculated under conventional accounting practices.

To accommodate the effects of inflation in determining a real rate of return on capital employed, income and capital employed can be adjusted for the effects of inflation. In the same way, funds available for distribution and expansion can be expressed as a relative measure by relating it to capital employed.

Three methods of calculating return on investment are:

- Historical cost—return on investment based on the historical cost of capital employed using conventional net income to determine the rate of return.
- Funds generated from operations—a return on investment using the historical cost of capital employed, but instead of net income, 'funds available for distribution or expansion' are used as a measure of return.
- Current cost of capital employed—this method uses funds available as a percentage of the current costs of capital employed.

The first two methods of determining return on investment offer a useful measure of rates of return using 'net income' and 'funds available'. However, both calculations may be distorted by the use of the historical cost base for capital employed.

## Exhibit II

### Examples of Relative Measures of Performance

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<i>Return on Capital Employed</i> (Note 1)	
Income (before interest, net of taxes)/reported capital employed	7.0%
Funds available/reported capital employed (before interest, net of taxes)	4.0%
Funds available/inflation-adjusted capital employed (before interest, net of taxes)	2.0%
<i>Return on Common Equity</i> (Note 2)	
Net income/common equity, as reported	11.0%
Funds available/common equity, as reported	6.0%
Funds available/inflation-adjusted common equity	2.0%
<i>Per Share Information</i>	
Net income per share	\$1.77
Funds available per share	\$0.98

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- Note 1: Capital employed is equal to reported total assets, less current liabilities.  
 Inflation-adjusted capital employed is equal to total assets (including fixed assets at replacement cost), less current liabilities.  
 Current liabilities excludes short-term debt and short-term maturities of long-term debt.
- Note 2: Equity includes deferred income taxes.  
 Inflation-adjusted common equity is equal to common equity as reported plus the difference between replacement and historical cost of fixed assets.
- 

The third method provides the current rate of return using 'funds available' and current costs of investment. This rate of return provides an insight into the reasons why investment in net plant and equipment may or may not be feasible at the present time. While rates of return calculated on the above bases will not be completely comparable, they will give an indication of the rate of return being earned and will facilitate comparison with alternative forms of investment. (Exhibit II).

### Per Share Information

One of the most commonly used indicators of business performance is 'earnings per share'. This financial indicator is used by the investor to determine the price/earnings ratio of stock when related to stock prices. It gives an indication of the payback period of the investment which can then be compared with similar ratios for other investments. In this context, the 'funds available' measure expressed on a per share basis may prove to be a useful measure as it will give a better indication of the ability of the firm to pay dividends.

### Summary

The use of a separate statement of 'funds available' to illustrate the effects of inflation takes an important and practical first step toward improved disclosure of business results. This approach permits the continuation of current accounting practices leading to the determination

of net income. As well, it provides a sound empirical basis for further developments which may take place in the field of accounting for inflation.

# Ways and Means of Implementation

The detailed analysis contained in previous chapters of the Report has dealt with the general impact of inflation on the economy, the problems of measuring this impact in the business sector, and the reaction of decision makers and the general public to current and revised methods of measuring inflation effects. There is clear evidence that inflation effects are detrimental to the economy in the short run and may be severe in the long run. No individual escapes the effect of inflation; few benefit from it. From a business standpoint, at best it retards and distorts economic growth patterns, at worst it affects the health and even survival of the business sector.

There is little doubt that some form of improved measurement is required and should be implemented without delay. But just to measure the effects of inflation would be of little value unless accompanied by disclosure—to shareholders, investors, government policy makers, business in general and to citizens at large.

## Criteria and Approach

The method proposed for adoption in Ontario permits a practical and useful start to be made on improving the measurement of business performances while recognizing that the following constraints exist:

- Inflation accounting systems are generally still under development. The replacement of or addition to entrenched accounting methodologies would have widespread effects. To be effective, changes must be seen as credible, consistent, objective and feasible; it would be unwise to proceed too far, too quickly.
- While Ontario can play a leading role in the introduction of inflation accounting, practicalities dictate that it must keep pace with implementation patterns in other jurisdictions. There must be universality of system structure, that is, uniformity of approach and system acceptance.

Based on these considerations, the Committee concluded that a gradual approach to change should be taken, and an interim or partial form



of inflation accounting should be introduced involving both measurement and disclosure. Measurement would involve an adjustment to funds generated from operations rather than income. Disclosure would take the form of a 'Statement of the Effects of Funds Available for Distribution or Expansion' of the business and be included with the financial statements.

The criteria for implementing the proposed program of financial disclosure of the effects of inflation recognize that:

- A uniform method of financial disclosure is required to enable comparison, analysis and interpretation of the effects of inflation by decision makers.
- Financial disclosure would be made on a broad basis including all business firms which are materially affected by inflation.
- Information on the effects of inflation should be disclosed at the earliest possible date.
- The interim form of disclosure should be amenable to change and improvement with experience.
- The developments of practices in jurisdictions other than Ontario should be recognized.
- The first-hand knowledge and experience of the business community and the accounting profession should be fully utilized.

The interim solution proposed represents a partial but important step toward the possible implementation of a full current value accounting system at some future time. The proposal does not affect the preparation and reporting of financial results using conventional accounting techniques. It is not unduly complex or costly to operate.

It can evolve naturally as further developments in the field are accepted as operating practice. Finally it does not conflict with the practices of other jurisdictions.

## **The Alternatives**

With respect to implementation, there are two alternative courses of action. Alternative One would place the responsibility for initiating financial disclosure of the effects of inflation on business. The government would recommend that disclosure on a uniform basis be implemented as soon as possible.

Alternative Two would involve the Government of Ontario directly in a program of implementation, including the drafting of regulations to existing legislation and requiring a one-year period of experimentation and exposure draft discussion.

A description of each alternative follows:

### **Alternative One**

That the Government of Ontario endorse the method of financial disclosure proposed in this Report as an interim approach to measuring the effects of inflation and further that the government recommend to business in Ontario that it include a 'Statement of the Effects of

Inflation' with its financial statements for fiscal years ending after December 25, 1977. Further:

- That financial disclosure of the proposed method be made by all firms affected by inflation.
- That the approach be used on a uniform basis by business until a more comprehensive change has been developed and proposed by the accounting profession or until such disclosure is considered to be no longer necessary.
- That the experience gained from this interim method of disclosure be used in an effort to develop a more appropriate accounting system during inflation.

## Alternative Two

That the Government of Ontario initiate the implementation of a uniform method of financial disclosure of the effects of inflation by way of amendments to the regulations to the Ontario Securities Act requiring such disclosure for fiscal years ending after December 25, 1978. Further:

- That draft regulations to the Securities Act of Ontario be used as an exposure draft during a discussion and experimental period.
- That the government recommend that the disclosure method suggested in this Report be used by business in Ontario during 1977 as a basis for experimentation and discussion.
- That business and the accounting profession be invited to join this initiative.
- That depending upon the experience gained with 1977 financial disclosure, the draft regulations to the Securities Act be modified, improved or changed so as to be implemented for fiscal years ending after December 25, 1978 for those companies which are quoted on the Toronto Stock Exchange.

The first alternative follows the traditional practice of relying on the private sector to initiate change in financial reporting. This approach captures the experience and knowledge of those directly involved in the development of methods of disclosure. It is implicit in this approach that as methods of accounting for inflation evolve in Canada and in other countries, and as the studies of current value accounting by the accounting profession are concluded, modifications and improvements could be incorporated into the information already being disclosed.

During the past few years, business in different parts of the world, including Canada, has experimented with various methods of inflation accounting but only a few companies have disclosed the effects. Those doing so have not used uniform approaches and methods. Many companies are understandably hesitant to proceed with 'experimental' disclosure since there is no assurance that other companies will make similar disclosures at the same time.

A decision by the Government of Ontario to initiate a program of financial disclosure would provide leadership in experimenting with a uniform method of financial disclosure on a broad basis. No method of

financial disclosure will be perfect and improvements will have to be made based on experience and practical application. There is considerable diversity in the problems encountered by different industries, and requirements for disclosure will ultimately have to take into account the need to address the problems of specialized industries. Some form of monitoring activities will be required, and although much of the expertise will come from business and the accounting profession, a government initiative in monitoring activity will incur some cost.

Alternative One is a self-regulating approach. It would be the preferred system, provided that all businesses would respond in a similar manner without delay. Alternative Two avoids the possibility of continued hesitation and ensures experimentation based on draft regulations, while encouraging wide-scale disclosure by business at the earliest possible time. The experience gained in 1977, including problems and benefits, could be taken into account in evaluating the exposure draft and future course of action.

## **Applicability of Financial Disclosure**

In terms of the effects of inflation on business, it would be appropriate to require disclosure by manufacturing, processing and trading businesses. Less utility would be derived from requiring disclosure from financial institutions such as banks, insurance companies and loan and trust companies, and from companies in service industries.

Another criterion is size. While a small business can be significantly affected by inflation if it has inventories and fixed assets, the benefits gained from developing the information might well be exceeded by the cost and effort. Therefore, a requirement that small business disclose the effects of inflation would seem unwarranted at the present time unless such information is being developed for purposes of obtaining a deduction for income tax purposes in recognition and relief of the effects of inflation on the business.

## **Adjustments for Inflation in Government Statistics**

Disclosure of inflation-adjusted results should not be confined to financial reports. To the extent of its ability, the Government of Ontario should consider the adoption of appropriate adjustments relating to the economy and to financial data. These adjustments should be included in public statistics produced by government and in the information utilized in policy formulation relating to taxation and other economic decisions.

To provide a reliable and effective data base for information on the effects of inflation, consideration should be given to the advisability of including adjustments as information to be submitted on the corporate tax return.



## **Implementation Considerations under Alternative Two**

The lead time that corporations would require to comply with any new disclosure requirement would depend upon the nature of the requirement and the amount of effort required of the corporations. For example, if the proposal for a supplementary statement of the effect of inflation on cash flow is adopted, corporations would need to know the precise requirements by August 31, 1977 at the latest to make any disclosure feasible for 1977.

With respect to necessary statutory requirements, the logical way of introducing such requirements would be through changes in the Regulations to the Securities Act and the Business Corporations Act. The Securities Act Regulations would cover all non-Ontario public companies that have issued equity shares in Ontario since 1967 or that are listed on the Toronto Stock Exchange. Financial disclosure for Ontario public companies is governed by the Business Corporations Act and their related Regulations and no difficulty is envisaged in the necessity for two sets of Regulations. The requirements of the Regulations to the Business Corporations Act would have to be limited to corporations that are offering securities to the public.

This approach excludes private companies, banks, insurance companies and loan and trust companies. It is possible that the disclosure requirements might not apply initially to financial institutions.

There may be a legal question as to propriety of incorporating these requirements in the Regulations to the two Acts. The financial disclosure requirements for annual financial statements are included in the Acts themselves at the present time, and the Regulations are used to amplify and explain the statutory provisions. It appears however that much of the amplification now contained in the Regulations is substantive. Section 147(h) of the Securities Act and Section 271 of the Business Corporations Act appear to permit statutory authority to make regulations of this nature.

Financial disclosure requirements have in the past been the responsibility of the Ontario Securities Commission for both the Securities Act and the Business Corporations Act. Regulations and statutes have been drafted by the Commission itself or by legal draftsmen in the Corporations Branch under the supervision of the Commission.

In this case, since changes to the Regulations will involve complex accounting matters and will require a considerable degree of accounting expertise in their drafting, the Ontario Securities Commission should engage professional advisors to assist them. It would also be appropriate to have the draft Regulations reviewed by the Financial Disclosure Advisory Board and by the accounting profession and the Accounting Research Committee of the CICA.

A final important consideration is one of public exposure and comment before the Regulations become final. It appears to be an unwritten policy of the Ontario Securities Commission that to the greatest extent possible proposed statutes and Regulations should be exposed to the business community for comment before they are made effective.



There are practical as well as psychological advantages in this policy since no group, however experienced and expert, can be certain that it has identified all the problems connected with its subject or that the pronouncements that it is making are completely intelligible to readers.

## **Conclusion**

The disclosure of accurate financial and economic information will play a major role in the future fight against inflation. It will enhance business decision making, broaden understanding of business activities and assist the formulation of economic policies and programs.

With the cooperation of government, business and the accounting profession, the task can proceed in an orderly and effective way toward the achievement of broader and improved disclosure goals. Implementation must be carried out on a cautious yet determined basis, in an orderly but action-oriented manner. The effects of inflation will not wait on the development of the ideal system. That is why action is required without delay.

## APPENDIX A

# List of Submissions

The Algoma Steel Corporation, Limited  
Appraisal Institute of Canada Incorporated  
Appraisal Institute of Canada, Ontario Association  
John B. Archer  
Arthur Andersen & Co.  
J. Wallace Beaton  
Bell Canada  
Joseph Berman  
The Board of Trade of Metropolitan Toronto  
Canadian Construction Association  
Canadian Council of Financial Analysts  
The Canadian Manufacturers' Association  
Canadian Pulp and Paper Association  
The Certified General Accountants Association of Ontario  
Edgar B. Charron  
Consolidated-Bathurst Limited  
Dominion Foundries and Steel, Limited  
Ernst & Ernst  
Gamma Management Engineering Ltd.  
J. K. Higginson  
Housing & Urban Development Association of Canada, Ontario  
Council  
Imperial Oil Limited  
Investment Dealers Association of Canada  
S. Wayne Lealess  
Murray Rumack, Stern & Cohen  
Thomas A. Nixon  
Noranda Mines Limited  
Ontario Chamber of Commerce  
Ontario Hydro  
Ontario Natural Gas Association  
The Ottawa Board of Trade  
M. C. Pereira  
J. G. Prentice

John Y. Rowe

J. E. Sands

Schneider Corporation

Stephen W. Semeniuk

Shell Canada Limited

The Society of Industrial Accountants of Canada

Southam Press Limited

The Steel Company of Canada, Limited

Union Carbide Canada Limited

Urban Development Institute (Ontario)

Valuation Systems Corporation

S. M. Vuckovich

Horst Zimmermann

Group Submission prepared by McMillan, Binch and  
Clarkson, Gordon and Co. on behalf of:

BP Canada Limited

Canada Packers Limited

Gulf Oil Canada Limited

Hugh Russel Limited

INCO Limited

John Labatt Limited

MacMillan Bloedel Limited

Maple Leaf Mills Limited

Massey-Ferguson Limited

The Molson Companies Limited

Noranda Mines Limited

The Steel Company of Canada, Limited

TransCanada PipeLines Limited

# Study Approach and Method

## Approach

Three key characteristics of the inflation problem provided an operational framework for the work of the study.

## Impact of Inflation on Business

The specific nature of the problems affecting business as a result of inflation was examined with particular reference to the relative impact on different sectors of the economy. Questions that were examined in this section were:

- Effect of inflation on rates of return.
- Effect of inflation on required rates of return and on employment.
- Effect of inflation on liquidity and available capital.
- Effect of inflation on investment in new productive capital.
- Long-run impact of inflation on wages, other income and living standards.
- Long-run impact of inflation on retirement income.

## Descriptive Value of Inflation Accounting

The degree to which inflation accounting methods describe and highlight the problems resulting from inflation were examined. Merits of the alternative inflation accounting methods and the technical issues relating to implementation were reviewed. An important criterion in evaluating and selecting an appropriate inflation accounting system was the extent to which such disclosure would cause the public perception of the effects of inflation on business to be improved.

Specific consideration was given to the value of inflation accounting according to the following users of financial statements:

- Investors
- Government
- Business
- Labour.



In addition, the practical problems and costs associated with the introduction of an inflation accounting system were examined.

## Impact of Adopting Inflation Accounting

The extent to which the application and use of inflation accounting would help to solve business problems resulting from inflation were examined. This analysis included the effects of adopting inflation accounting methods on business decisions (including pricing, production and investment) and the impact of those decisions on employment and living standards. In addition, the potential impact on government revenues if an inflation accounting system were adopted for taxation purposes was also examined. Specific questions that were addressed included the effect of an inflation accounting system on:

- Corporate taxes and government revenues
- Prices
- Wages and employment
- Capital availability
- Investment.

## Method

The comprehensive research program was divided into eleven study areas. The impact of inflation was considered from a number of aspects including capital markets, taxation, business decision making, government economic policy formation and the public perception of business.

## Initial Literature Search and Data Collection

The subject of inflation accounting has been attracting increasing attention in recent years as the rate of inflation in many countries has risen to unprecedented levels. Inflation accounting studies have already been undertaken in the United Kingdom, Australia and New Zealand, and disclosure of the impact of inflation is required by corporations filing with the Securities and Exchange Commission in the United States. In addition, there is a large volume of literature relating to all aspects of inflation.

The first assignment for the Committee was to assimilate the basic characteristics and problems of inflation and the various accounting methods proposed to describe its impact on corporations.

## Call for Submissions and Briefs from all Interested Parties

The Committee concluded that the issues under consideration were of such importance that the views of all sectors of the public should be sought. Accordingly, advertisements were placed in newspapers in English and French throughout Ontario calling for written submissions relevant to the Committee's terms of reference. In response, forty-seven submissions were received.

Submissions generally proposed that there should be some form of disclosure of the impact of inflation on corporations. Many were concerned with the number of different inflation accounting systems. These suggested that Canada should not get out of step with other jurisdictions, and should wait until there is agreement, particularly in the United States, on a comprehensive system of inflation accounting. Many submissions recommended changes in the taxation system particularly with reference to inventories (submissions were required to be received by February 28, 1977, before the federal budget proposed a 3% tax relief on inventories). A listing of the submissions received by the Committee is included in Appendix A.

## **Examination of the Impact of Corporate Debt Financing during Periods of Inflation**

Most of the writings and studies on the subject of inflation accounting are in agreement, at least conceptually, with the adjustments to income to reflect the current cost of capital consumed in the production process (i.e., inventories and fixed assets). There is, however, no consensus on the extent to which business enterprises gain from financing operations with non-equity capital and the most appropriate way of accounting for such a gain in the financial statements of corporate enterprises.

R.M. Skinner, FCA, Accounting Advisor to the Executive Committee of Clarkson, Gordon & Co., was retained to prepare a research paper on this topic. Glenn P. Jenkins, Insitute Associate of the Harvard Institute for International Development, provided additional comments.

## **Examination of Alternative Methods of Accounting for Inventories**

Inflation accounting requires that an adjustment be made to costs charged against revenues to reflect the replacement of inventory sold at current costs. The Committee reviewed alternative methods of accounting for inventories to determine the impact of inflation and adjustments that could be practically applied.

## **Examination of Alternative Methods of Accounting for Fixed Assets**

The inflation impact on fixed assets is similar to that of inventories, but the replacement cycle of fixed assets is significantly longer than in the case of inventories. The cost increase experienced through the replacement cycle period is normally significant. The major problem of accounting for fixed assets during periods of inflation lies in devising a practical and relevant method of calculating replacement cost on which to base the replacement charge against revenues. Recommendations to date include external appraisals, generation of data internally by corporations and the use of general and specific indexes.

## Review and Analysis of Securities and Exchange Commission Experience with Replacement Cost Disclosure

The United States Securities and Exchange Commission has required large public corporations with year-ends ending on or after December 25, 1976, to disclose the replacement cost of fixed assets and inventories, and also depreciation and cost of sales figures calculated by reference to replacement cost at date of consumption in the operating process.

In considering the implementation of a system of inflation accounting disclosure in Ontario, the Committee was interested in obtaining the reasoning behind the type of disclosure recommended by the Securities and Exchange Commission and the problems and details of its experience with the proposals and the reaction of corporations.

## Study of Impact of Inflation on Results of Individual Companies in Key Industry Sectors

In order to obtain an initial understanding of the relative impact of inflation on individual corporations and different business sectors, a number of individual companies were selected for analysis. The financial statements of these companies were adjusted to eliminate the effects of inflation and then analyzed to determine the characteristics of the inflation impact on these different companies.

This study proved useful in identifying specific problems in developing a comprehensive inflation accounting system and determining the types of business that would be most affected by inflation.

## Study of Impact of Inflation on Key Industry Sectors

In order to identify the impact of inflation on key industry sectors of the economy, it was decided to utilize the FP-FRI Canadian Annual Data File developed jointly by the Financial Research Institute of Canada and The Financial Post. The data file includes 325 Canadian companies representing thirty different industry groups.

John Bossons, Professor of Economics, Institute for Policy Analysis, University of Toronto, was retained to assist the Committee staff in the analysis of the data and to prepare a detailed analysis of the work on the FP-FRI data file.

## Study of Impact of Inflation on Small Business

In order to assess the effect of inflation and the potential impact of inflation accounting on small business, the Committee retained Irving L. Rosen, FCA, to survey and present the views of small business.

## Study of Impact of Inflation on the Total Corporate Sector of the Economy

In order to ascertain the impact of inflation on the economy in general, it was necessary to relate the information obtained from the FP-FRI data base to the total corporate sector of the economy. Professor Bossons was additionally retained to perform this macroeconomic analysis, using Statistics Canada information and data supplied by the Ministry of Treasury, Economics and Intergovernmental Affairs.

In addition, separate analyses were performed on other key economic indicators based on aggregate data available from a number of sources, including Statistics Canada.

## Study of Impact of Inflation on Corporate Taxation and Government Revenues

The impact of inflation on the corporate taxation system was reviewed as a separate area of research. Specific problems of industry sectors were analyzed and effective taxation rates based on inflation-adjusted taxable income were calculated. The FP-FRI data file was used to project the impact of tax change alternatives and was used as a basis to project the overall impact of such changes on government revenues.

## Study of Impact of Inflation on Capital Formation and Financing

This study examined the operation of the capital markets over the last decade and traced the impact of the onset of high rates of inflation on the demand and supply of capital.

Specifically reviewed were the sources of new financing and the proportion of risk capital (equity) to fixed capital.

Other areas examined included the relationship between stock prices and inflation-adjusted earnings, corporate liquidity, rates of return on capital employed in a business and the extent to which inflation accounting might change the investor's perception of the health of corporations and cause a change in the rates of return required by investors.

## Other Studies

The impact of inflation and potential impact of some form of inflation accounting on other users of financial data was also considered by the Committee. These studies generally consisted of discussions with various representatives of government, labour and business.

A review was also made of the financial and non-financial information that corporations report to the general public to see whether perceptions could be changed by the use of additional disclosure. Consideration was given to the alternative forms of information disclosure that might be developed.





# Terminology

*Inflation accounting*—a variety of accounting systems which adjust conventional financial statements for the effects of inflation. These systems would include general price level accounting (GPL), current value accounting (CVA) and current cost accounting (CCA).

*Current dollars*—the nominal value of the dollar.

*Constant dollars (deflation-adjusted)*—the expression of current dollars in terms of their purchasing power, measured by reference to a base year.

*Income, earnings and profits*—terms used interchangeably to describe the net results from operations of a business venture for a specific period. The terms refer to after-tax earnings unless otherwise stated.

*Cash flow (funds generated from operations)*—the proportion of business income which generates working capital. Calculated by reference to conventionally defined net income exclusive of items which do not affect working capital such as depreciation and deferred taxes.

*Capital maintenance adjustment*—adjustment to income or funds generated from operations to reflect the impact of inflation on the cost of maintaining the capital of a business. This will include adjustments in respect of increased costs of inventory and fixed assets.

*Inflation-adjusted*—income or funds generated from operations calculated after adjustments in respect of *capital maintenance*, reduced to the extent that the owners of a business utilize other sources of capital to finance business operations.

*Funds available for distribution or expansion of the business—inflation-adjusted* funds generated from operations.

*Real income*—*inflation-adjusted* income after adjustments are made to the residual income amount to reflect changes in the purchasing power of money (*deflation-adjusted*).

*LIFO*—a system of accounting for inventory whereby the cost of items

sold are valued and charged against revenues at the most recent production or procurement cost.

*Replacement cost*—the lowest amount that would have to be paid in the normal course of business to obtain an asset of equal operating or productive capacity.

*Business, enterprise or firm*—terms used to describe all types of business ventures including corporations, unincorporated businesses, commercially-oriented government agencies and boards and crown corporations.

# Suggested Methods of Calculating Inflation Adjustments

This appendix describes the suggested methodology for calculating adjustments in respect of inventories, fixed assets and non-equity financing. Further details documenting this analysis are provided in a supplementary paper to this report.

## Inventories

The impact of inflation on business inventories has been of major concern to business in recent years. During periods when raw material, wages and overhead costs increase rapidly, businesses are required to obtain additional capital to finance the higher carrying value of their inventories. This problem usually calls for immediate action in contrast to the longer term responses associated with similar increases in costs of replacing property, plant and equipment.

Research indicates that the impact of inflation on inventories varies between individual business enterprises and between industry sectors. Because this deviation is often significant and because the problems associated with inventories have an immediate and direct impact on the liquidity of business enterprises, the use of a standardized general index to measure the impact of inflation on inventories would be unacceptable for financial reporting purposes. For taxation purposes, however, practical considerations may result in the use of a general index.

## Calculation

The adjustment of inventories should be determined by reference to the difference between the historical cost of inventory and the production or procurement cost of inventory at date of sale.

As is now the case in determining cost of sales on an historical cost basis, the accuracy of the calculation to determine production or procurement cost at date of sale will depend on the nature of the present accounting records maintained. Where detailed costing records are maintained on a regular periodic basis, which is the case in many businesses, production cost at date of sale can be easily determined by ref-



erence to the latest recorded costs. In the absence of these records, the procedure followed is normally:

- Opening inventory (usually based on an estimate of latest production or procurement cost) + purchases during the year – closing inventory (often established by a physical count and valued at an estimate of latest production or procurement cost).

In these cases, it would not be difficult to calculate, in a similar manner, an estimate of current production cost at date of sale. The method of calculation is that suggested in the Manual published by the Institute of Chartered Accountants in England and Wales<sup>44</sup> on current cost accounting. An example of this method follows:

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Cost of input to inventory (raw materials, wages, overhead, etc.)	\$150,000
Decrease in inventory volume:	
Opening inventory 10,000 units at \$ 8 each	
Closing inventory   8,000 units at \$12 each	
Decrease                   2,000 units	
Average current cost of inventory per unit during the period ( $\$8 + \$12$ ) = \$10	
2	
Average cost of decrease in inventory volume over the period: \$10 x 2,000	<u>20,000</u>
Current cost of sales	<u><u>\$170,000</u></u>

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The \$8 and \$12 amounts will represent the latest estimated production or procurement cost of inventory at the beginning and end of the period respectively.

The effect of using this averaging method is to produce an inflation-adjusted cost of sales amount which consists of:

- The historical cost of input to inventory during the period:  
     Either increased by the average current cost of the decrease in inventory volume during the year  
     Or decreased by the average current cost of increase in inventory volume during the period.

Because this is an averaging method, it should be used with caution. It relies on two assumptions holding true throughout the accounting period. Where this method is used, it should be calculated for the shortest possible accounting period.

The two assumptions are:

- Any increase or decrease in inventory volume occurs evenly during the period.
- Any change in production costs occur evenly during the period and therefore the average production cost of inventory can be obtained by averaging the current cost at the beginning and end of the period.

The proposals for calculating the adjustment in respect of inventories have been made so as to enable businesses to continue to utilize current accounting practices for their normal business operations and to enable

the necessary calculations to be made accurately, keeping administrative effort to a minimum.

## **Fixed Assets**

Inflation affects fixed asset costs in the same way as inventories. As the replacement cycle is considerably longer, the effect on corporate liquidity is spread over several years and may not become critical until a substantial part of the fixed assets of an enterprise has to be replaced at some time in the future. The impact of inflation on inventories may represent the most immediate problem facing business, but the potential problem arising from the increased costs of replacing fixed assets is potentially much more severe in the long run.

The objective in making an adjustment in respect of fixed assets is to provide an estimate of funds required to maintain productive capacity. To make the adjustment, it is necessary to determine the current cost of the present productive assets. The determination of specific asset values requires use of various techniques, for example, appraisals, and specific pricing and indexing, many of which are expensive and subjective. In addition, the resulting valuation may not be representative of future capital requirements as the assets may not be replaced in the same form.

The use of a general index, on the other hand, would provide a rough measure of the impact of inflation and would have the advantages of being objective and less expensive to use. In addition, available statistical data would suggest that the degree of deviation of the impact of inflation on fixed assets between industry groups may not be as significant as is the case for inventories.

## **Calculation**

The business investment component of the Gross National Expenditure Implicit Price Index<sup>45</sup> could accordingly be used to adjust the historical cost of assets to current values—at least until better methods of valuation can be developed.

Business would identify the year of acquisition of at least the major elements of their fixed assets. The historical costs associated with these acquisitions would then be indexed through the use of the GNE deflator. Sometimes fixed asset records will not provide data on the year of acquisition and in these circumstances estimates may have to be made of the age structure of the fixed assets currently in use (i.e., define an appropriate inventory base of fixed assets). The capital additions, shown in the financial statements of the enterprise, from the earliest year of acquisition included in the inventory base, could be indexed up to current day costs by use of the GNE deflator. In the case of assets owned in other countries, a single index representing the effect of inflation on capital investments could be used.

This approach will produce a current cost estimate that will be sensitive to the age structure of fixed assets, and although based on a general index will provide an estimate of the order of magnitude of the cost increases incurred. The adjustment to be made in the statement of

funds available for distribution and expansion would be calculated as the difference between depreciation calculated on the historical cost basis and depreciation calculated by reference to the indexed value. The depreciation policy of the business should be applied consistently to the two calculations (that is, the estimated useful life in both cases should be the same).

## **Adequacy of Funds to Replace Fixed Assets**

Inflation results in erosion of the capital base of an enterprise. As inflation has been present in Canada in varying degrees for decades, the cumulative effect of this erosion is significant, particularly in view of the high rates of inflation experienced in recent years.

It is proposed in Chapter 5 of this report that only the current year's portion of the accumulated capital erosion be deducted in arriving at funds available. Thus, even if future distribution were restricted to funds available, it is unlikely that sufficient funds would be provided for replacement of the operating capacity of the enterprise if replacement of all assets took place at the same time.

The main reason for not taking the backlog funding into account is that most business enterprises do not replace all assets at one time. Replacement of assets normally takes place on a regular basis as existing assets wear out and funds for replacement become available. In this way, funds are continuously reinvested and backlog funding is unnecessary.

## **Essential and Non-essential Assets**

The inflation adjustment in respect of fixed assets should be calculated by reference to the costs required to maintain present productive capacity of the assets consumed by the enterprise in its operations. It therefore follows that this adjustment should be calculated with respect only to those assets which are 'essential' to the maintenance of productive capacity. If an asset is not 'essential', then presumably, it will not be replaced and a provision for maintenance of the asset would be inappropriate.

A suitable definition of 'essential' would be that recommended by the New Zealand Inquiry into Inflation Accounting:

"an asset which is essential to the enterprise is one which in the normal course of business would be replaced if it were disposed of, whether or not the replacement unit would be physically identical".

'Disposed of' in this context would mean sold or consumed. Under this concept, most inventory and fixed assets which are held by an enterprise would be deemed essential to the continuing operations of the business. Only where the enterprise has made a firm decision to dispose of an asset or not to replace an asset with another asset of the same or greater operating capacity would an asset be regarded as no longer essential to the enterprise.

In such circumstances any previously provided funds may become available for distribution. However, such amounts should not be

included in the statement of available funds as this is intended to show the impact of inflation on the funds generated from operations for the current year only.

## **Exclusions**

### **Inventories**

The adjustment in respect of inventories is only to be made in respect of 'essential' items of inventory. For this reason, businesses which participate in operations which do not involve the acquisition or production of goods on a regular basis should not attempt to disclose the effects of inflation in the manner recommended.

Inventories for which the calculation of an inflation adjustment would be inappropriate would include, but not be restricted to:

- Inventories that are acquired for specific ventures or projects with no intention of replacement.
- Inventories required for investment rather than trading purposes (including advance purchases of raw materials and supplies in anticipation of price increases).
- Inventories of land and buildings.
- Inventories held by commodity dealers (where replacement cost is normally equal to sale price).

### **Fixed Assets**

In disclosing the impact of inflation on the ability of an enterprise to refinance its productive capacity, the primary concern has been directed towards the 'productive assets' of an enterprise. Investments in other assets, such as land and buildings not related directly to productive assets, represent a fundamental and necessary part of capital investment, but do not usually deteriorate or depreciate in the same manner as machinery and equipment and do not pose a significant capital maintenance problem. Often the increase in the value of the land on which a building stands may, due to inflation, increase in value to an extent which offsets the depreciation in the value of the building. In addition, the useful life of buildings is generally much longer than that of productive equipment and often with renovations their useful life can be extended indefinitely.

For these reasons, land (because it does not depreciate) and buildings not directly associated with productive assets (normally because the extent of depreciation is extremely uncertain and because replacement can generally be deferred indefinitely) should not be adjusted in calculating the additional funds required to maintain operating capacity.

### **Mineral Resource Assets**

These expenditures represent costs incurred to explore and develop mineral resources such as oil, gas and metal ores.

There is currently little consistency in the method of accounting for



the costs incurred on these ventures and there is not yet agreement as to the method of determining the current costs that would be incurred to develop an equivalent amount of mineral resources. In order to comply with the Securities and Exchange Commission disclosure regulations, mineral resource industries in the United States have attempted to develop a common approach to the problem of establishing a practical method of measuring the required capital maintenance provision. At the time of writing, this group had not reported and it is understood that a consensus on this issue has not yet been reached.

It would be inappropriate, at this time, to recommend any one system of determining an adjustment in respect of the maintenance of productive capacity of these resources. If a satisfactory method of determining an adjustment in respect of these assets can be developed and become universally accepted, then this proposal should be revised.

## **Financing**

In assessing the liquidity of an enterprise and its future capital financing requirements from the standpoint of the owner, it is necessary to take into account the degree to which other sources of capital are used in financing business operations.

There is no objective method of projecting the future capital structure of an enterprise and therefore any adjustment that might be proposed in respect of non-equity financing has to be used in a measure of the current capital structure.

It has been concluded that the financing adjustment to be made in the statement of funds available for distribution and expansion should be based on the ratio of equity to non-equity capital that existed at the beginning of the accounting period.

## **Equity Capital**

Equity capital should be computed in accordance with present accounting methods. Shareholders' equity is a defined term in accounting practice and usually consists of share capital, share premium account (if any) and retained earnings. Share capital should normally include preferred stock. However, where the preferred stock is redeemable at the option of the ordinary shareholders and has no right to participation in surplus profits or in a winding up, preferred stock may be included in non-equity capital.

## **Non-equity Capital**

A suitable definition of non-equity capital is more complex. The definition has to be considered in relation to the objective to be achieved by this adjustment—to identify the extent to which the owners of the business can be expected to finance a portion of the increased cost of maintaining productive capacity by capital obtained from other sources (non-equity capital).

This non-equity capital would therefore include items such as bank borrowings, trade payables and long-term debt, in the form of bonds



and debentures. In addition, other liability items such as accrued expenses, dividends payable and current taxes payable might also be regarded as a source of financing, although it should be noted that these items do not reflect an inflow of funds to the business.

## Deferred Taxes

The treatment of deferred taxation is of critical importance in defining non-equity capital. Under the proposed system, the statement of funds available for distribution and expansion deals with the funds generated from operations which are not affected by deferred taxes—all funds generated from operations are available for expansion and possible distribution, subject to the capital maintenance considerations. It is suggested that the outstanding liability for deferred income taxes be treated as part of equity on the grounds that with the present taxation system, an enterprise which replaces its assets on a regular basis, will generate sufficient capital cost allowances to defer payment of the liability indefinitely.

## Monetary Items

Inflation affects not only the value of physical assets such as inventories and fixed assets but also the value of items denominated in terms of monetary units. During period of inflation, the value of the monetary unit declines and therefore items expressed in monetary units can also be said to decline in value. This decline is represented by additional amounts of capital that would be required to maintain the same 'real' level of 'monetary assets'. Conversely liabilities denominated in terms of monetary units decline in a similar manner.

It has been concluded that rather than recommend separate adjustment in respect to monetary assets and monetary liabilities, that a suitable approach would be to net the two amounts in arriving at the definition of non-equity capital, the net liabilities being available to finance inventory and fixed assets.

## Net Monetary Assets

In certain circumstances, the setting-off of monetary assets and liabilities may result in a net monetary asset position being obtained. This will be true in the case of banks and similar financial institutions.

The main concern of business during inflation is with its ability to finance the increased costs associated with replacing and maintaining its productive capacity. The arguments in favour of providing a further adjustment in respect of the reduction in real value of net monetary assets are less compelling and no adjustment is proposed.

## Monetary Assets—Definition

Monetary assets, for the purpose of calculating the financing adjustment, would be defined as total assets less inventories, fixed assets, intangible assets, investments (including investments in subsidiary and

associated businesses, and excluding short-term investments) and loans and advances to subsidiary and associated businesses, not of a current nature.

Any assets, which are directly related to corresponding liabilities, should be set-off before calculating monetary assets and liabilities.

## Monetary Liabilities—Definition

Monetary liabilities are defined as total liabilities less deferred income taxes and minority interests which should be included in equity capital (subject to the alternative classification of preferred stock).

## Calculation

The adjustment for non-equity financing in the 'Statement of the Effects of Inflation on Funds Available for Distribution or Expansion' would then be calculated by expressing non-equity capital as a percentage of non-equity capital plus equity capital and reducing the additional funds required to maintain productive capacity by this percentage.

## Consolidation

In preparing a consolidated set of financial statements for a group of companies, each entity loses its individual identity; inter-company balances are eliminated. This has particular significance when defining monetary assets and monetary liabilities used in the calculation of the financing adjustment.

Potential problems in calculating the financing adjustment for a group of companies, exist where the capital structure of the parent company is significantly different to those of the subsidiaries. For example, the parent company is financed equally by equity and non-equity capital, but may provide all the financing for the operations of a subsidiary company by investment in equity capital. In such a case, there would be no financing adjustment in respect of the operations of the subsidiary, whereas based on the consolidated statement, it would be fifty per cent.

The financing arrangements of the parent company may be complex and totally unrepresentative of the normal financial structure of the subsidiary companies in the group. Therefore, the financing adjustment should be calculated on the capital structure of each individual subsidiary company, particularly where that subsidiary company is not wholly owned and its shares are publicly traded. In addition, it would seem inconsistent, within the context of the overall consolidated entity, that the aggregate financing adjustments in respect of each of the subsidiaries would be less than the adjustment if the parent company's capital structure were used.

## Foreign Operations

The adjustment in respect of inventories and fixed assets and any related financing denominated in a foreign currency, presents special problems which arise from the accounting treatment of foreign exchange. The subject of foreign exchange is currently under review by The Canadian Institute of Chartered Accountants and a recently published pronouncement by the Financial Accounting Standards Board in the United States is generating considerable debate.

For the purpose of calculating funds available, inflation adjustments should be calculated in the local currency and translated into Canadian dollars at the average exchange rate prevailing during the accounting period.

## Costs and Feasibility of Inflation Accounting

Businesses in various countries have experimented with forms of inflation accounting for some time. The additional costs that have been incurred in preparing inflation-adjusted information depends on the complexity and the methods of determining the inflation adjustment. The system currently proposed in the United Kingdom and, to a lesser extent, that introduced by the Securities and Exchange Commission in the United States, require that companies obtain detailed estimates of replacement costs. In the case of fixed assets, many companies have attempted to establish replacement costs by employing external experts to value all or substantial parts of their fixed assets. In the year of introduction of the inflation accounting system, these valuations could represent a significant cost burden. In subsequent years, the initial valuations could be frequently used as a base and updated by the use of internally or externally generated statistics.

The suggestions for inflation accounting disclosure contained in this report were designed to be cost effective. Many companies, in filing inflation accounting information with the Securities and Exchange Commission, expressed considerable doubts as to the relevance and usefulness of the replacement cost estimates, particularly with reference to fixed assets. Accordingly, until such time as there is more general agreement as to the usefulness of a specific adjustment in respect to fixed assets, the adjustment should be calculated by the use of a single general index. The index chosen for this purpose is the business investment component of the Gross National Expenditure Implicit Price Index.

It is recognized that the use of a single general index will, in some cases, reduce the relevance of the adjustment to the circumstances of an individual enterprise. However, alternative statistical information, such as industry and asset specific indexes, is not currently available from Statistics Canada or elsewhere in a sufficiently comprehensive form. The benefits to be gained from the use of a single index which is simple to implement and understand are major factors at this time.

In the case of the inventories, available evidence suggests that it is not a particularly difficult or onerous task to calculate the inflation adjustment. The information can be either extracted directly from

accounting records or by simple adjustment to calculations based on these records. The adjustment in respect to financing can be undertaken by a simple calculation based on previously determined ratios of equity and non-equity capital.

In summary, the proposed disclosure represents the most practical approach to the problem of measuring the impact of inflation in terms of costs and feasibility, commensurate with obtaining a meaningful adjustment which is relevant to the circumstances of individual enterprises.

## **Objectivity**

The adjustments in respect to fixed assets and financing are objective calculations. In the case of inventory, the proposed method of determining the adjustment is unlikely to require a significantly higher degree of subjectivity than is required under current accounting practices.

Consideration has been given as to whether the statement of the effects of inflation should be audited. However, as the main objective of the proposal is to ensure that the effect of inflation is disclosed to the public, it has been concluded that the question of audits should be left to the discretion of individual enterprises.



# Example—Effect of Inflation on Investments of Individuals

An example of the necessary adjustments to investment income is given in Table 10. It is insufficient to deflate current dollar amounts (that is, to accrue at the figures shown at the top of the right-hand column). It is also necessary to deduct what is required to offset the erosion of the real value of capital which would occur if part of gross income were not set aside for this purpose. As a result, the effect of the 9.4% inflation in 1976 is to make the real yield in 1976 on the beginning asset value only 3.1%, compared to an apparent assumed yield of 12%. To obtain real income from nominal income requires two adjustments; the provision for capital maintenance and the deflation of current dollars to constant purchasing power dollars.

**Table 10**  
**Example Illustrating Impact of Inflation on Measurement of Income From Capital Assets**

	Income in 1976 Dollars	Income in 1975 Dollars
Income from investment	\$1,200	\$1,096
Provision for capital maintenance	856	782
Net income	<u>\$ 344</u>	<u>\$ 314</u>

Note: In this example, it is assumed that the beginning value of the asset was \$10,000 and that total accrued income before provision for capital maintenance was \$1,200 inclusive of accrued unrealized capital gains. The provision for capital maintenance is the amount required to keep the real value of the initial investment unchanged through 1976, and reflects the percentage changes (8.56%) in the Gross National Expenditure (GNE) Implicit Price Index between the last quarter of 1975 and the last quarter of 1976. The restatement of 1976 income in terms of 1975 prices reflects the rate of change from 1975 to 1976 (9.44%) in the average price level for each year as measured by the GNE Implicit Price Index.

The example shown in Table 10 is artificial in that an assumed gross

rate of return of 12% inclusive of accrued capital gains was arbitrarily chosen. The following example is more realistic in that it is based on the actual total yields over the past six years from a specific and relatively popular investment asset.

Consider the case of a wage-earner whose after-tax wage income of \$12,000 in 1971 exactly kept pace with inflation between 1971 and 1976. Intending to accumulate the down payment for a house, he consistently saved one-sixth of his wage earnings starting in 1971, investing these savings in 90-day bank certificates of deposits.

The results are shown in Table 11, measured in dollars of constant purchasing power.

**Table 11**  
**Example Illustrating Impact of Inflation on Savings**  
**1971-1976**

	Savings Out of Wage Income	Interest Income	Provision for Loss of Purchasing Power	Net Income	Net Savings
1971	\$ 2,000	\$ 46	\$ 32	\$ 14	\$ 2,014
1972	2,000	158	142	16	2,016
1973	2,000	377	448	(121)	1,879
1974	2,000	594	904	(310)	1,690
1975	2,000	641	877	(236)	1,764
1976	2,000	929	939	(10)	1,990
Total	<u>\$12,000</u>	<u>\$2,695</u>	<u>\$3,342</u>	<u>(\$647)</u>	<u>\$11,353</u>

Note: All figures are stated in constant (1971) dollars. Taxes on interest income are ignored. Detailed calculations are included in Table 12.

Over the six years 1971 to 1976, the individual's gross savings were \$12,000. However, after deducting the net loss of \$647 on his savings, the net amount of capital which he had accumulated was only \$11,353. Effectively, as a result of the inflation during these six years, the individual not only did not break even on his investments, but lost the equivalent of four months savings.

The above example is indicative of the unattractiveness, in real terms, of certificates of deposit as an investment. In real terms, the yield on such certificates has been negative in each of the past four years. That being the case, it is a symptom of the impact of inflation on the capital markets that more than \$32 billion was invested in bank certificates of deposit as of the end of April 1977—of which \$10 billion had been invested since the end of 1975<sup>46</sup> Inflation has created such uncertainty about most investments that investors are still using these relatively liquid assets in spite of their negative real yield.

**Table 12**  
**Net Income from Savings Invested in**  
**90-Day Certificates of Deposit, 1971-1976**

	1971	1972	1973	1974	1975	1976
Wage income (in current dollars)	\$12,000	\$12,576	\$13,764	\$15,732	\$17,424	\$19,068
<i>Accumulated savings</i>						
Assets at beginning of year	—	\$ 2,046	\$ 4,307	\$ 6,976	\$10,383	\$14,216
Savings during year	\$ 2,000	2,096	2,294	2,628	2,904	3,178
Interest income (also saved)	46	165	375	779	929	1,475
Assets at end of year	\$ 2,046	\$ 4,307	\$ 6,976	\$10,383	\$14,216	\$18,869
<i>Income from savings</i>						
Interest income	\$ 46	\$ 165	\$ 375	\$ 779	\$ 929	\$ 1,475
Less: Provision for capital maintenance	32	148	514	1,185	1,272	1,490
Net income in current dollars	14	17	(139)	(406)	(343)	(15)
Less: Adjustment to deflate to 1971 dollars	—	1	(18)	(96)	(107)	(5)
NET INCOME IN 1971 DOLLARS	\$ 14	\$ 16	(\$ 121)	(\$ 310)	(\$ 236)	(\$ 10)

Source: *Bank of Canada Review*, various issues, Statistics Canada, *National Income and Expenditure Accounts* (Catalogue No. 13-001). Interest rates used are annual averages of monthly rates. The price index used to calculate capital maintenance provisions and to deflate incomes is the Gross National Expenditure Implicit Price Index.

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# References and Notes on Data Sources

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- <sup>2</sup>The sample of 279 large Canadian non-financial companies used in this study was extracted from the Financial Research Institute of Canada-The Financial Post, Canadian Annual Data File.
- <sup>3</sup>The combined federal/provincial corporate income tax rate in 1971 was approximately 51%. In 1975, the combined federal/provincial rate was between 47% and 50%. Businesses engaged in manufacturing and processing activities were permitted a 7% deduction. For the 279 companies included in the sample (see 2 above), the average effective tax rate in 1975 was approximately 45%.
- <sup>4</sup>*Budget Document*, issued by the Honourable Donald S. Macdonald, Minister of Finance, March 31, 1977, page 37.
- <sup>5</sup>Staff calculation based on federal government estimates and Statistics Canada data.
- <sup>6</sup>Non-equity financing, also termed net monetary liabilities, is defined in Appendix D, page 128.
- <sup>7</sup>Committee of Inquiry into Inflation and Taxation. *Inflation and Taxation*. Report of Committee of Inquiry into Inflation and Taxation, R.L. Mathews, Chairman.
- <sup>8</sup>Statistics Canada. National Income and Expenditure Accounts; Catalogue 13-001 (Quarterly).
- <sup>9</sup>Gelfand, Derry & Associates Limited. Studies on the Canadian public's awareness of, knowledge about and attitude towards the pulp and paper industry.
- <sup>10</sup>See Reference No. 7, page xv.
- <sup>11</sup>A. J. Merrett and Allen Sykes, "The Real Crisis now Facing Britain's Industry". *The Financial Times*, England, September 30, 1974.
- <sup>12</sup>Inflation Accounting Committee. *Inflation Accounting*. Report of the Inflation Accounting Committee, F.E.P. Sandilands, Chairman.
- <sup>13</sup>Business Gross Fixed Capital Formation Component of the Gross National Expenditure Implicit Price Index. Statistics Canada, Catalogue 13-001 (Quarterly).
- <sup>14</sup>Figures deflated using the Gross National Expenditure Implicit Price Index.
- <sup>15</sup>See Reference No. 14.
- <sup>16</sup>See Reference No. 3.
- <sup>17</sup>Statistics Canada, Corporate Financial Statistics, Catalog 61-207 (Annual) and Industrial Corporations, Catalogue 61-003 (Quarterly).
- <sup>18</sup>See Reference No. 8.
- <sup>19</sup>\*Accounting Standards Steering Committee, *The Corporate Report*. A Discussion Paper.
- <sup>20</sup>\*American Institute of Certified Public Accountants. *Objectives of Financial Statements*. Report of the Study Group on the objectives of financial statements, Robert M. Trueblood, Chairman.
- <sup>21</sup>\*Howard Ross. *Financial Statements: A Crusade for Current Values*.
- <sup>22</sup>See Reference No. 12.
- <sup>23</sup>\*United States. Securities and Exchange Commission. *Notice of Adoption of Amendments to Regulation S-X Requiring Disclosure of Certain Replacement Cost Data*.
- <sup>24</sup>See Reference No. 7.
- <sup>25</sup>Committee of Inquiry into Inflation Accounting. *Report of the Committee of Inquiry into Inflation Accounting*. I.L.M. Richardson, Chairman.
- <sup>26</sup>J.R. Hicks. *Value and Capital*. Second edition. Oxford University Press, 1946, page 172.
- <sup>27</sup>See Reference No. 4.
- <sup>28</sup>Budget Speech delivered by the Honourable John N. Turner, Minister of Finance, February 19, 1973, page 2.
- <sup>29</sup>See Reference No. 4.
- <sup>30</sup>*Ontario Budget 1977*. The Honourable W. Darcy McKeough, Treasurer of Ontario, April 19, 1977, page 4.

- <sup>31</sup>Joshua Mendelsohn, Carl G. Reigie. *Tax Concessions to Boost Investment: A Perspective*. C.D. Howe Research Institute, 1976.
- <sup>32</sup>See Reference No. 4.
- <sup>33</sup>See Reference No. 4.
- <sup>34</sup>See Reference No. 5.
- <sup>35</sup>Staff calculation based on data obtained from sample companies (see Reference No. 2) and Statistics Canada data.
- <sup>36</sup>See Reference No. 6.
- <sup>37</sup>Staff calculation based on data obtained from sample companies (see Reference No. 2).
- <sup>38</sup>Staff calculation based on data obtained from sample companies (see Reference No. 2) and Statistics Canada data.
- <sup>39</sup>\*Staff calculation based on estimates included in Ontario Budget, 1977.
- <sup>40</sup>See Reference No. 7.
- <sup>41</sup>United States Department of Commerce, Bureau of Economic Analysis. *Survey of Current Business*. U.S. Government Printing Office, Washington, D.C.
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- <sup>43</sup>See Reference No. 9.
- <sup>44</sup>\*Accounting Standards Committee: *Guidance Manual on Current Cost Accounting*.
- <sup>45</sup>\*See Reference No. 13.
- <sup>46</sup>*Bank of Canada Review*, May 1977, Table 6.

\*Full details in Selected Bibliography





